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CAMERA CRAFT



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BY LAURA M. ADAMS

PORTRAIT

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. III.

SAN FRANCISCO, CALIFORNIA, MAY, 1901.

NO. 1.



THE BIRTH OF THE CLOUD

BY ALEXANDER G. McADIE.

ILLUSTRATED BY THE WRITER.

If we lived on a planet without an atmosphere, such as our own satellite, and were suddenly carried to the earth and required to specify what, of all the wonderful things seen, most excited our interest, we would be forced, in perfect fairness, to answer "the floating reservoirs—the clouds." Because we do live on a planet that has an atmosphere, and daily see the never-ending procession of aerial forms marching across the sky we are unable to rightly marvel at the clouds, though we may rightly admire the beauty of the cloud-scape. We fail to realize, too, that we are living at the bottom of a sea—a sea of air and not of water. This is a deeper sea than that of the sailing ships, and soundings exceeding five miles have recently been made in it. Twilight indicates a sensible atmosphere of perhaps forty miles, and some measurements of meteoric phenomena would extend the envelope of air to one hundred miles; but for all practical purposes the sea of air with which man is concerned may be considered as five miles deep. Even so, it is an ocean more vast than the broad Pacific, the ridged Atlantic, the Arctic, the Antarctic, and all the waters of the globe combined. At the bottom of this sea men walk about unconscious of a pressure of nearly one ton on each square foot of their bodies. This pressure is not constant but varies from hour to hour and day by day, sometimes as much as one hundred pounds.

Far above move those strangely plastic water carriers, the clouds, and it



HELMHOLTZIAN BILLOW

A peculiar characteristic of the fog named after the famous German physicist who described the action of the fogs perfectly, although he had never seen them

may be that a longing comes for the wings of a bird that we, too, might journey in the realms of the cloud. But like Prometheus bound to his rock, man seems chained below and wears out his existence at the bottom of the sea of air. Deep sea fishes are structurally adapted to withstand the enormous pressure of the superincumbent layers of water; and man, a deep-air animal, is also suited for his habitat. When he wishes to change from one level to another he can laboriously climb the side of some high mountain, realizing as he toils upward that his respiratory system is adapted to low levels. With less physical effort he can rise in an artificial way by balloons, and range through levels with pressure varying from fifteen to five pounds a square inch. Unlike the birds, however, he can not, unassisted, sound the air. He is outclassed by the eagle. Even the lazy buzzard circling slowly across the sky, soaring without effort over hill and valley, watching with sharp eye the slow-moving animals on earth, has the advantage of man.

The sea of air has even more moods than the sea of water. In the atmosphere the great disturbances are at the bottom while the upper strata are comparatively tranquil. What is called weather is for the most part a displacement of normal strata. Deflection, dipping, or underflowing of some customary air stratum by another, means a marked change in man's environment, and naturally he comments freely thereupon.

Few of us realize that the atmosphere is never absolutely at rest. On the calmest day and in the most sheltered nook the air, seemingly still, will be

found on closer examination to be in motion. Difference of temperature causes convectional currents, or what we may call gross motion. There are other motions, of which the layman can know but little. The president of the British Association for the Advancement of Science stated in the presidential address for 1898 that:

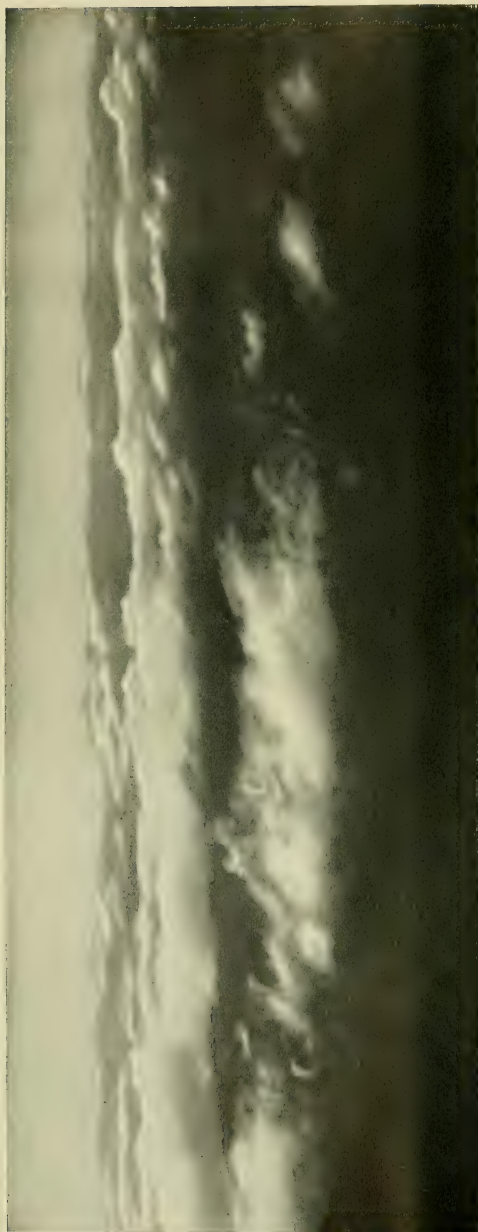
"The total energy of both the translational and internal motions of the molecules locked up in quiescent air at ordinary pressure and temperature is about 140,000 foot-pounds in each cubic yard of air. Accordingly the quiet air within a room 12 feet high, 18 feet wide, and 22 feet long, contains energy enough to propel a one-horse-power engine for more than twelve hours."

As seaweeds betray the set of the ocean currents, so do clouds betray the aerial steam lines. In studying air drainage, then, let us follow closely the lines and levels of the condensed water vapor. A bank of water vapor (and the vapor is independent of the air) rests like a sediment at the bottom of our sea of air. Under usual conditions a cubic foot of air weighs about 490 grains. A cubic foot of water vapor when the dew-point is 60° weighs about 6 grains. Variation in the amount of water vapor affects man more than change in air. A warm day becomes unbearable if the humidity is high and quite pleasant if the humidity is low. Conversely, a cold day is bracing if dry and doubly disagreeable if damp. It is this water vapor which gives us fog, cloud, snow, rain, hail, frost and ice. With the aid of fine dust, it gives the wonderful colors of sunset. Like a warm breath upon a window, it may veil the sunlight, and we then call it a cloud.

On the coast of California there is a city justly famed for the abnormalities



SUNSET ON A SEA OF FOG



STRAIGHT SEA FOG

of its climate. Overcoats and heavy wraps are worn in midsummer and the lilies bloom in December. From May until September almost no rain falls; yet during this period, with clocklike regularity, great banks of fog march in every afternoon and cover the hills. Day after day the inhabitants of this city walk about under a sediment of water vapor, knowing that 1500 feet above, the air is clear and 20° or 30° warmer. Truly, this is an ideal locality in which to study the formation of fog, the birth of the cloud, and to note the shifting of the strata at the bottom of the atmospheric sea. Like an immense blanket, the fog is drawn through the Golden Gate. Below the blanket, all is gray and dreary; above, all is sunshine and delightful weather.

Now, fog, whether it appears for a few hours at certain seasons, as in New York harbor, or regularly on summer afternoons, as at San Francisco, or for weeks and months, as on the banks of Newfoundland, indicates air motion. It is, moreover, the first reaction in the process of rain-making. The murky town fog of London, seemingly, is far removed from the pure mists of the Scottish Highlands; still the underlying principle of formation is the same.

Ground fog, sea fog, town fog, tule fog, and the clouds through all the levels are Nature's unfinished efforts at rain-making. In that vast laboratory there are many ways of warming and cooling water vapor. One level glides over another and the daintiest of lacelike cirrus clouds are formed; one current rises and another falls, and a sheet of cloud, level as a prairie, marks the plane of condensation. Aerial fleets and flocks appear and disappear as the water vapor is cooled by contact, ascension, mixture, or otherwise.

Air motion is, as a rule, initiated by difference in temperature. In the wonderful land of California, owing to peculiar topography, the temperature of the air will often differ as much as 50° in 50 miles. Especially is this the case in the vicinity of the Golden Gate, where on one side the ocean maintains a temperature of about 55° , while a few miles inland the temperature on summer afternoons may reach 110° . Here, then, one may expect to find well-marked air currents, drafts, and counterdrafts. Here the rain engineer should begin his studies. In the early morning after a night of fog, the city roofs glisten with little pools of water. Wherever the fog impinges on a condensing



BILLOWS

surface, the water trickles down. One side of a street is wet, the other dry. Under the trees, in the redwood canyons of the slopes of Tamalpais, the drifting fog, after caressing the leaves, patters gently to the ground. A few hours earlier this water was in the Pacific; as vapor it traveled perhaps a thousand feet upward. Then settling and chilled by the cold water surface, it was carried inland as fog, and meeting in the leaf a modest but efficient rain-maker, turns to water again and flows in part into the sea.

To the student of cloud formation no science is more valuable than photography. With the constant changes of the air currents comes new formations of vapor, and in preserving for future comparisons the record of these changes the camera plays an all-important part. The illustrations accompanying this article were made on Mt. Tamalpais, and give but a faint idea of the multitude of fantastic shapes that march past the Golden Gate during the summer afternoons. Processes of reproduction necessarily cause a loss of detail in the pictures but an idea of the exceeding beauty of this class of photography, even without the scientific interest attached, can be gained by a comparison of the different illustrations.



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MAY



BY MRS. C. L. PROCTOR

VIOLETS

PRIZE PICTURE, CHANNING CLUB EXHIBIT

TWO RECENT PHOTOGRAPHIC EXHIBITIONS

WITH THE LESSONS TAUGHT BY THEM AND
REPRODUCTIONS OF SOME OF THE PICTURES

The Channing Club exhibition at Berkeley, April 11th-13th, was one of the most successful of the minor exhibitions ever held in California. There were accepted and hung two hundred and twenty-seven prints, all answering the artistic requirements of a competent jury, and while there were but few pictures of great merit the average was exceedingly high.

In formulating the rules governing the exhibition the club placed an almost prohibitive time limit of five months on the work of the exhibitors. This militated somewhat against the success of the exhibition, but did not affect the number of pictures submitted; the quality only being influenced. Much artistic taste was displayed in matting and framing the prints, and the exhibition as a whole was both artistic and harmonious.

The jury of award, composed of Miss Bisbee, Prof. J. N. LeConte, O. V. Lange, Dr. H. W. Fairbanks and George Wilcox, after a prolonged discussion, decided that there were no pictures up to the standard set by the San Francisco salon, and therefore were no first prizes. The following awards were then made:

CLASS I.

Landscapes — Second prize, "The Bargdil Bridge," by James E. Taggart; third prize, "March Weather," by F. T. Wilkinson; honorable mention, "Camp Taylor," by Lockwood.



BY ADELAIDE HANSCOM

THE LATEST NOVEL

PRIZE PORTRAIT, CHANNING CLUB EXHIBIT

Water scene—Second prize, "Belated," by Mrs. C. L. Proctor; third prize, "Lake Tahoe," by A. M. Hill.

Cloud Effect—Second prize, "A Winter's Sunset," by Adelaide Hanscom.



BY H. D'ARCY POWER, M. D.

THE HAUNTED LAKE

INDUSTRIAL ARTS EXHIBIT

CLASS II.

Portraiture—Second prize, "The Latest Novel," by Adelaide Hanscom; third prize, "As I Was Saying," by Mrs. C. I. Proctor; honorable mention, "Child Study," by Mrs. Gertrude Cohraft.

CLASS III.

Still Life—Second prize, "Violets," by Mrs. C. I. Proctor; third prize, "A Study," by F. G. Kranase; honorable mention, "Sweet Brier," by H. Hindel.

The success of this exhibition is important to the photographic interests of the coast. It means that the old idea of holding exhibitions only in large cities is a thing of the past. It has been shown that, with proper management, it is possible to attract the attention of outside workers to a small exhibition, thus arousing the interest of the home-workers and spurring them to renewed effort.



BY OLIVER LIPPINCOTT

ZINDARA

INDUSTRIAL ARTS EXHIBIT

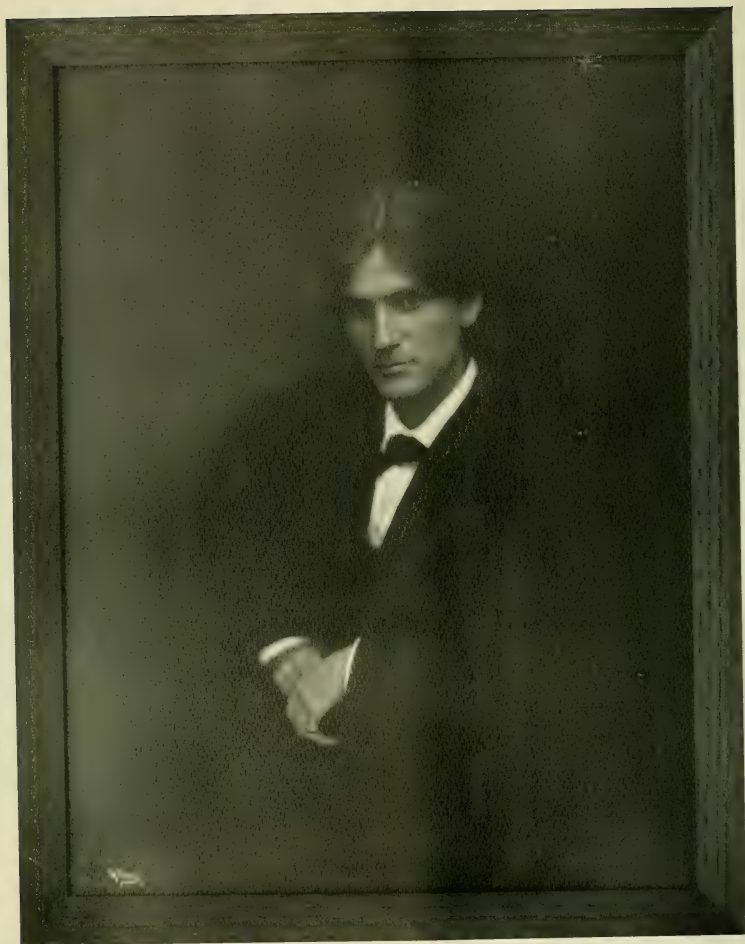
THE PHOTOGRAPHIC SECTION OF THE INDUSTRIAL ARTS EXHIBITION

Photography vied with paintings, tapestries, black and whites, pottery, and nearly every branch of the fine arts at the California Club Exhibition of Industrial Arts, at Mechanics' Pavilion, April 17th-30th. No harder test of the popularity of photography has ever been made, but through the whole of the exhibition the photographic section was crowded with visitors.

The committee in charge of the section displayed great judgment in arranging the display, and the appearance of the pictures was very pleasing.

The prominent exhibitors were Miss Laura M. Adams, Arnold Genthe, W. E. Dasonville, Oliver Lippincott, Dr. H. D'Arcy Power, Oscar Maurer, J. I. S., Carl E. Ackerman, L. E. Rea and R. H. Furman.

The famous collection of Indian pictures, by E. S. Curtis of Seattle, was exhibited in the reception room, where they attracted much attention.



BY GEO. L. WILCOX

PORTRAIT OF CHARLES KEELER, POET



BY F. K. LAWRENCE

AN EXPERIMENT IN LIGHT VALUES

BY F. M. STEADMAN

A very pretty and useful experiment in the study of the light scale, or rather, the color scale as it is produced and governed by light, can be carried out in this manner:

On a table in one end of a room place on end a piece of light-colored paper rolled into a tube, and in the other end of the room place two persons, one in each corner and holding a lighted candle. The experiment is best made in the night, as no other light should interfere.

The person making the experiment should sit one or two steps in front of the roll of paper, so that the light from the candles will be on his right and left sides and more or less in the rear, according to the size of the room. Now hang a black cloth behind the roll and look at the latter through a cardboard having two holes cut in it for the eyes, and the ends bent against the sides of the head to keep the direct candle light from interfering with the eyes as the candles are brought closer to the roll.

When the eyes become accustomed to the appearance of the roll ask one of the assistants to approach with his candle until it can be plainly observed that the side lighted by it is brighter than the other side lighted by the candle still in the corner. Or, in other words, that there is created a sense of "light and shade."

Now bid the other assistant to advance, and note the shady side increase its color or brightness until it equals, and then surpasses, the other side, forming another effect of light and shade the reverse of the first. Now, in like manner, bid the assistant on the shady side to approach until the effect is again reversed, and so on until the candles are inconveniently close to the roll.

Then, for the candle of the shady side, substitute a small oil lamp, sending it back in the corner, and having it brought up until its side of the roll is just perceptibly lighter than the other side lighted by the candle that is close. Now, for the close candle substitute another lamp equal to the first, but send it back so that, as usual, its light just predominates. Then repeat the same experiment of approaching steps with the lamps as was done before with candles.

It is very interesting to note how many times the sense of sight can appreciate the reversal of the light values, or, as it is called, "light and shade," and the experiment proves that the term is simply a convenient one to express the scale of values on a varied or curved surface when it is touched by different degrees of light from varying sources. If any one thinks that the term "varied or curved surfaces" is of little importance, they should try the experiment with a flat piece of paper. It will be quickly seen that it is scientifically impossible.



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**THE BATTLESHIP KENTUCKY
SHORTLY AFTER BEING PLACED IN COMMISSION**

PHOTOGRAPHED FOR THE NAVY DEPARTMENT TO SHOW THE ACTION OF THE PROPELLERS AS
THE SHIP SWINGS AROUND

PLACING A BATTLESHIP IN COMMISSION

By ENRIQUE MULLER, OFFICIAL PHOTOGRAPHER, U. S. NAVY

To put a battleship in commission and make her ready for sea is an undertaking the magnitude of which few landsmen realize. The numberless details to be attended to, the thousand and one things to be thought of, and, above all, the necessity for immediate action, tend to produce a condition well calculated to drive even the tried men of the navy to despair. The first official action in placing a battleship in commission is the reading of the rules and regulations to the officers assembled on the quarterdeck. Then the pennant on the maintop and the stars and stripes at the stern are unfurled at a signal, the exact time is recorded and reported to Washington and the ship is in commission.

Now the executive officer takes charge of the ship, and he has his hands full, especially if the vessel is scheduled to sail within a few days. When it is said that a war vessel is scheduled to sail on a given date it means that she will sail on the very minute given, no matter what the conditions are. Last year, when the battleship Massachusetts was laid up in reserve at the League Island Navy Yard, with neither officers nor men on board, orders were issued to send her to sea at the earliest possible moment. With no coal in the bunkers, no provisions in the storeroom and no crew to man her, it seemed a job of weeks, but in twenty-four hours she steamed out of the yard, took the rest of her coal on the way, and reported in Boston thirty-six hours later.

After a ship has been commissioned the coal bunkers are filled to overflowing by the bluejackets, who work like beavers. Another detachment of jackies are busy transferring wagonload after wagonload of provisions from the wharf to the hold. On shore the captain of marines is busy with his men, drilling from morn till night. Now the sailors arrive in long lines, each with his hammock or bag over his shoulder. They come from the training-ship Vermont, moored alongside the Cob Dock in the Brooklyn Navy Yard.

The big guns fore and aft, the turrets and the swinging cranes are carefully tested. The crew of each of the guns is given instructions and the master-at-arms sees his busiest time. When the ship has finished coaling, up goes the red flag, warning all that the ship is taking on ammunition; no one is allowed on board now. Meanwhile the bluejackets are busy cleaning up ship. Buckets of hot water, sponges and rags are to be seen on every side. The battleship is being rubbed down. By night she is in best of trim, for on tomorrow she sails. The sailors are full of joy. The five years' voyage means much to them and they are anxious to be off.

With the morning all is busy. The awnings from fore and aft deck are taken in and housed below; the quick-firing guns are carefully covered; even the masts are protected by thick jackets of canvas from the blackening clouds of smoke soon to pour from the eager funnels.

Soon the government tugboat appears ready to start the ship upon her voyage. A bugle sounds for roll call. In a few minutes every member of the crew is in his place—the pilot is on the commander's bridge—all is ready. Now comes the basket of carrier pigeons and the last messenger from the commandant's office with final orders.



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**THE BATTLESHIP INDIANA
BEING TOWED THROUGH THE ICE FROM THE BROOKLYN NAVY YARD**

THIS PICTURE WAS TAKEN ON FEBRUARY 19, 1898, SHORTLY BEFORE THE BATTLE OF SANTIAGO, AND IS ONE
OF THE HIGHLY PRIZED PICTURES OF THE NAVY DEPARTMENT

"Take in the gangway," shouts an officer.

One bell goes down to the engine room for attention.

"Let go your spring line," the pilot orders.

The tugboats are pulling now with all their power. The big vessel, stern first, swings out. Now she moves. The bugles sound from all the neighboring vessels, where the officers and marines are drawn up on the quarterdeck. As the vessel passes the other warships, cheer after cheer comes from the sailors. The strong-lunged men of the navy are bidding their comrades farewell.

Now the tugs are leaving the ship, and the big vessel moves under her own steam. As she gains headway a sharp report thunders, closely followed by another, until the full salute of thirteen guns is fired, in honor of the admiral's flag in the navy yard. On the Cob Dock the shore battery answers the salute. One navy tugboat follows the battleship down the bay to bring back the pilot, and as the open sea is reached the government photographer is busy making the final official photographs for the Navy Department. The pilot signals now for the tugboat to come alongside, he jumps on board, the tug gives three short whistles for bon voyage, the battleship gives three long blasts in response, and she is off.



BY HARRY G. SMITH

CURIOSITY

INDIVIDUALISM IN MATS AND MOUNTS

WITH DESCRIPTIONS OF SEVERAL WHICH ATTRACTED MUCH ATTENTION AT THE
CHANNING CLUB EXHIBIT

BY O. V. LANGE

At the recent print exhibit, under the direction of the Channing Club, Berkeley, some very effective mountings for rough and smooth surface prints were shown. It must be admitted that the manufacturers of the modern mounts leave little to be desired, still you must take what is offered and use it whether it is just to your liking or not. In this new mounting are great possibilities for the exercise of individual taste and skill, as an infinite variety of charming combinations of either harmonizing or contrasting tints and tones may be effected to suit the particular prints at hand. This mat, considering the range of its usefulness, is quite cheap. They are not only mats, but mounts at the same time, that is, the print is first mounted on any surface, the tone or tint of which may suit the particular style of print that is being finished, leaving a margin of from one to two inches. This mount is a little larger than the



BY W. J. PIATT

A MOMENT MUSICALE

opening of the mat to be used. The selection of the mat is where artistic skill becomes necessary, as it may be of such a peculiar tint as to give a harmonious or contrasting color scheme with the sub-mount and picture.

For example, one of the thirteen or fourteen pictures, in this particular display of matted prints, was of a pretty young girl standing in profile at a table, seemingly interested in arranging flowers in a vase. The lighting was most effective, as it struck the figure directly from the front, thus giving one-fifth illumination and four-fifths shadow, yet full of detail. It was printed on



BY A. B. KEYWORTH, WELLINGTON, N. Z.

LANDSCAPE

smooth royal bromide paper, imparting a rich warm glow. This print was mounted on a cardboard over which had been pasted ordinary manila wrapping paper, thus blending most charmingly with the print. A wide three-inch mat surrounded this, leaving a two-inch margin around the print. The outer mat was of a warm chocolate and, while the whole color scheme was bright, it was restful.

Another fine effect of an entirely different color scheme was the prize picture of Class I., Cloud Effects. There was a broad and sketchy winter's



BY W. L. CORSEN

PORTRAIT

sunset feeling about this that was very charming. It was printed on royal bromide rough, $5\frac{1}{2} \times 8\frac{1}{2}$ in size, mounted on a rather dark, olive card. Fully two and a half inches of the mount showed through a black mat, thus giving great power, by contrast, to the very few but brilliant high lights in the sky and ripples on the water.

Still another instance of the mount and mat plan was more of a harmony in gray tone values than a result in tint contrasts. The sister of this charming picture was "Expectancy," a little miss of about twelve years, standing on the threshold in an attitude of unconscious grace, readily suggesting the title. The only light used was that coming from the open door; the rest of the little figure, in white, was silhouetted against a shadowy background. Only the extreme forward outline was in strong light, the rest being in a mysterious

gray. The picture was on standard bromide "B." This gave a pleasing soft gray, doing away with all hard, meaningless black masses so often seen in lighting of this kind. The sub-mount on which this picture was placed had a cool gray tint, thereby slightly warming the grays in the print; the mat over all was large enough to leave a good margin of mount exposed. The surface was rough and of a neutral gray tone (the trade name is settelow gray). As it had no color in particular it gave value to what little there was in the other grays, making a very pleasing combination.

It seems to me that if the mount manufacturers would get up something of this kind so the photographer could make his own effect, the mounts and mats coming separate and then being pasted together, as desired, to suit a particular print. They ought to become popular with the adherents of the new school in photography.



BY C. MORTIMER STANLEY

THE COURT—CAPISTRANO

SUCCESSFUL FAILURES

BY FRANCOIS VOITIER



BY E. G. CLEMENT

NE of my friends recently handed me a negative with the request that I account for its thin and weak appearance, adding that nearly all of his negatives were the same way. From the conversation I was surprised to learn that he had never tried to find out the trouble before, as he had hoped that finally matters would adjust themselves. After pointing out to him the causes that had combined to make his negatives thin and weak, and explaining how these defects could be avoided in the future, I took advantage of the opportunity to offer a little advice on the subject of failures, which I repeat here in the belief that it may prove of benefit to others.

A "successful failure" seems a paradoxical expression, but a little

thought will show that, far from being a contradiction, it is a reality. There are two kinds of failures: First, a failure pure and simple, one for which you never know the reason, because you have not taken the pains to find out, and hence derive no benefit from it; and, second, a failure the causes of which you immediately set about to ascertain, and thus seek to avoid its recurrence in the future. There is a great difference when you come to think of it.

Chemicals have their own way of acting, but will always act in the same way under precisely the same conditions. If a negative is imperfect in any respect it will always develop the same imperfections if handled under exactly similar conditions. Hence, the most natural way to correct the trouble would be to change the conditions and so enable the chemicals to work in the direction which would serve to attain the desired result. I have merely used chemical action as an example to demonstrate how futile it is to blindly follow the same method without expecting the same result.

A failure taken advantage of is a stepping-stone to success. When you turn out a negative or a print that is not what it should be, do not throw it aside and let that feeling of discouragement take possession of you, which is so detrimental to advance. Examine your work closely and find in what respect it has fallen below par, and afterwards, the proper course to pursue to raise the standard of your future negatives and prints to a higher level. Then, and not until then, are you competent to make another attempt.

Devote three-quarters of your spare time to intelligent reading, the other quarter to putting into practical use the knowledge thus acquired. The results will be surprising. You will then be in a position to start anew with a

feeling of confidence and independence, a feeling that you are master of the situation. Your next negative will show a marked improvement, and why? Simply because thought and the acquisition of additional knowledge have led you to abandon a course of procedure that proved to be faulty and to adopt one that will ensure correction of the errors which have combined to make your previous work imperfect. In this way we are always advancing. We thus take advantage of our failures and make them, by our own energy and perseverance, the stepping-stones to ultimate success; in other words, we are making "successful failures."

Do not let failures be a source of discouragement. What has been done can be done again. Others have mastered the problems of correct exposure and development, and so can you. The good work your neighbor is turning out is the fruit of painstaking study; he is reaping his reward, and that same reward is waiting for you, but it must be earned by the same method, and no other. So you see, you are not trying to accomplish an impossibility.

Whatever success I may have attained in photographic manipulation has been due to the fact that I have profited by my failures, and instead of wasting good material in fruitless efforts to correct errors without attempting to remove the cause, I have set about, along the lines of reading, study and experiment, to find out where the trouble was, thus fitting myself to handle future work with more success. If you do not profit by your mistakes, you can advance but slowly and imperfectly, and, broadly speaking, the extent of your success is measured by your ability to intelligently grapple with failures. If you let disappointment, discouragement and dissatisfaction take the place of energy, perseverance and hope, the buoy of successful photographic manipulation will never be burdened with your anchorage. Remember that there is no royal road to learning; all have to start on kindergarten principles and pass through the various stages of advancement until the graduating day; but the rapidity of our progress is dependent upon ourselves.

This negative is fogged by the use of an excessive quantity of alkali; that one is too dense from over-development. If, on the one hand, you continue to exceed the maximum amount of accelerator, and, on the other, persist in extending the period of development beyond a reasonable time, the printing quality of your negative will continue to be injured by fog and abnormal density. But if, instead, you proceed to proportion your solutions correctly and stop the action of the developer before too much density is built up, by having removed the cause of the trouble, naturally the effect will disappear simultaneously.

So let us determine to make our failures a source of profit. If in each case we master them instead of permitting them to master us, they will gradually become less frequent, so that finally we will reach a state of perfection the enjoyment of which is rendered far sweeter by the knowledge that we have attained it through our own energy, perseverance and tact.

Oscar Maurer and W. E. Dassonville, two of the best-known San Francisco photographers, will shortly leave for Paris, where they will open a studio. Both of the young artists will be missed in photographic circles, as they have always been prominent in both club and field work.



AT FERNBROOK PARK

"Groves, through whose broken roof the sky looks in."

Outings

by J. S. Ross

ILLUSTRATED BY GILBERT HASSELL

This is the season when the "Man in Town" begins to feel that all is not as it should be. Going down town in the morning his attention is divided between the news and the patent medicine advertisements, which describe in alluring phrases the ills to which flesh is heir. During the day he is possessed by that feeling aptly termed "perfunk" by the Philistines. At night he hunts up his fishing tackle and spends an hour mending a broken rod. Suddenly he makes a determination. Unknown to him, he had this determination long before. The country and the woods, the fields and the streams have drawn him on until they have him chained. His longings must find vent. With his determination comes temporary peace, but still there is a certain feeling of dissatisfaction.

While the voice of the country urges him to forsake the town, the town holds him with bonds that know no sentiment. What does the business care for the hungry feeling for air and water and trees? Feebly protesting, the "Man in Town" sees the budding trees burst into bloom, feels the warm air from the southland fan his cheek, and tries in vain to forget his desire in the whirl of the "busy life."

One day he hears the office boy telling the stenographer about the picnic at Fernbrook. This starts a train of thought that stays with the "Man in Town" all day. Recollections of his last picnic are still strong. He remembers the early start, the crowds of boys and girls, the exhilaration of the ride through fields of growing grain, and then calls the office boy in consultation.

When the day of the picnic arrives the "Man in Town," with pocket camera and fishing tackle, meets the office boy at the ferry depot. The office

boy is armed with a huge baseball bat and is belted so that he can hardly breathe.

"Guess it'll be a fine day," the boy remarks.

"Couldn't be better," the "Man in Town" answers, and feels several years younger because the office boy deigned to notice him. He feels that years are dropping from his shoulders as he watches the crowds throng upon the boat, and when the other side is reached he has forgotten the cares of life in the rush for the train. As the train speeds through the glories of Alameda County toward the foothills his heart begins to beat as it did years before when he took his first ride past the grandeur of the mountains. When the train, after a short hour and a half of running, pulls up at Fernbrook Park, in the heart of Niles Canyon, the spirit of the wooded hills enters his soul and the peace he longed for is his.

Hour after hour he wanders up and down the brook, making a cast here and there, but more often reclining on the bank to watch the fleecy clouds drift slowly across the bits of sky above the treetops. Then, floating on the gentle breeze, come the voices of the boys and girls as they climb the hills to join their comrades. He feels the love of all things and dreams.

When the "Man in Town" goes to work the next morning he greets the



AT FERNBROOK PARK

Pleasant it was where woods were green
And winds were soft and low,
To lie amid some sylvan scene,
Where, the long, drooping boughs between,
Shadows dark and sunlight sheen
Alternate, come and go.—*Longfellow.*



AT FERNWOOD PARK

There is a quiet spirit in these woods
That dwells where'er the gentle south wind blows.
—Longfellow.

office boy with a smile and asks him about the next picnic. Two weeks later he and the office boy, good chums now, travel together on the narrow gauge to Sunset Park, in the Santa Cruz Mountains. The man is young again and knows it. His one-day vacations have accomplished wonders, and to his friends he grows enthusiastic over picnics. As the summer advances his face begins to lose the lines of care and his eyes brighten. "What a fool man is," he thinks, when he hears his fellows longing for a vacation. "Why don't they go on a picnic and forget themselves for a while?" In glowing language he tells them of the beauties of Fernbrook, the Santa Cruz Mountains and his weekly pilgrimages—"pilgrimages for peace" he calls them. His waning interest in photography is aroused and he spends his nights at work upon the pictures he has secured. To his surprise he finds that the pictures have a charm that none of his earlier work possessed. He seems to have caught the spirit of the woods and hills and to make the pictures tell his love for them. The long dormant love for art is rekindled, and his thoughts by day and dreams by night are filled with a growing worship of all outdoors and he is indeed happy, happy because his life is filled with new hope and his veins with new blood.



CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

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VOL. III

SAN FRANCISCO, CALIFORNIA, MAY, 1901

NO. 1

With the first number of the third volume, CAMERA CRAFT presents a cover to its readers, representing a new figure in art, Photography. Does its significance appeal to you?

The use of slang is so universal and far-reaching that modern literature has been obliged to bow to the inevitable, and it is seldom that a publication of recent issue contains a page of pure English. Even the compilers of dictionaries have had to recognize the use of slang by adding appendices giving the derivation, meaning and substance of current slang expressions. The coiners of these new words are artisans of no mean caliber, and some of the words and expressions originated by them will live as long as English is spoken.

However, CAMERA CRAFT desires to register a protest against the use of several words frequently used by amateurs and photographic writers. For instance, a beginner in photography is not a "fiend." Neither is he a "crank." He is an amateur photographer, and as such deserves to be considered on the same plane as the student in other branches of art. The student of drawing, of sculpture or of painting is referred to as a student, not as a "crank" or "fiend."

Why should the student in photography be so designated?

"The Birth of the Cloud," by Alexander G. McAdie of the United States Weather Bureau, in this issue, offers suggestions to the photographer which will be appreciated by every student.

Says Tick-tack in *El Imparcial* (Mex.):

PHOTOGRAPHIC RUINATION There are people who ruin themselves in being photographed. Don Aniceto Oronoz has brought suit against Don

Fausto Almohadillo for an account of \$75.08, itemized as follows: One dozen and a half of *senora chata*, with mantilla, tambourine and goblet, size *budoar*; six of child with wax taper in hand, doll in arms, near rustic cross; twelve of *sultana* on Austrian sofa, by the seashore; eight of *senorita*, hair loose, doves on shoulder; six of Senor Almohadilla as a *torero*; six of the same in dress of Spanish student; six of the same in *ranchero* dress (illuminated);

the same *senor*, nude (in acrobat's tights), *haciendo cristos*, with iron thongs; the same, giving the scent to a hunting dog (porcelain), *senorita* in boat; one hundred postal photographs of Senor Almohadilla on a *chinampa*; amplification of portrait of mother of same; Senor Almohadilla laid out (*de mentira*) amid tapers and surrounded by his family, etc.

And this man earns barely forty dollars a month as collector for a small retail house.

What a heaven for photographers.

Los Angeles is thoroughly imbued with the photographic spirit. Every daily and weekly newspaper is devoting page after page to photography, and the Los Angeles Club is booming as it never did before.

COMPETITIONS The universal popularity of photography is beginning to be recognized more and more by the publishers of the world.

Now comes a magazine called *American Country Life*, which will practically be launched through the aid of photography. The magazine will be published by Doubleday, Page & Co., of New York, who made *The World's Work* a success in less than a year. The first number will appear this fall, and to procure suitable illustrations for the first several numbers the publishers offer a series of cash prizes for photographs of any outdoor subjects that will come within the scope of *Country Life*.

The *Ladies' Home Journal*, *Leslie's* and many of the other large magazines are conducting photographic competitions, and the amateur photographer never had a better chance to gain fame and a little pin money.

A photographic supply dealer says in his advertisement in this number: "If you are an ——— photographer buy your supplies from an ——— dealer." A dealer who possesses the courage to proclaim this policy to his prospective customers is destined to succeed.

THE PRESIDENT'S VISIT This month the photographers of California will have a glorious opportunity to make pictures of famous men. The presence of President McKinley and many members of his official household, together with the Governor of Ohio and hundreds of prominent visitors, and the attendant scenes will furnish ample material for the amateurs. The launching of the battleship Ohio, the bay parade, the processions and the night illuminations will be scenes the like of which have been but seldom seen on the Pacific Coast. Every amateur should use his camera during the week of the President's stay and send the result of his work to friends in the East. In this way the State is advertised and an interest created in the affairs of the West. During this time the eyes of the country will be upon California and its reception of the nation's Executive. See that you do your share in holding this attention.

The new committees appointed by President Erwin of the California Camera Club have started to work with a vim, and the coming year will undoubtedly be the brightest in the history of the organization.

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS
CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

The Henry Troth (Philadelphia) exhibit, the sixth of the series of individual exhibits, was the last attraction at the society. This exhibition is fully described by the accompanying article, by Mr. Louis A. Lamb, who voices the sentiments of all those who were so fortunate as to view the collection.

Our second salon is now under discussion, and will occur during the fall or winter of this year. The high standard of the previous salons will be maintained and the lines broadened. The committee will be composed of advanced critics and artists, including "wise men from the East." It is expected that this salon will far surpass our last one, both in the number of prints hung and the quality of the work.

An associate membership of the society is a new feature for the near future. This membership will be a most popular feature, including as it does admission to a series of lectures, concerts, exhibits of lantern slides and pictures, entertainments and other features that will be added at the time the programs are made up.

HENRY TROTH'S EXHIBITION

BY LOUIS A. LAMB, C. S. A. P.

An extraordinary welcome was given to Henry Troth of Philadelphia by the Chicago

Society of Amateur Photographers when seventy-eight of his works, constituting the sixth loan exhibition of the society, were hung on the walls. Whatever divergence of opinion may have existed as to the prints of previous exhibitors there was, for once, no material difference as to those which Mr. Troth sent for this display. If there ever was pure photography—photography *in excelsis*, one might say—he is its exponent. For one thing his prints put a decisive quietus on all that class which has for its text "the inherent virtue of method" apart from artistic vision. Here are "straight photographs," unretouched, unmanipulated, undoctored either in negative or in print, some on platinum paper, some on plain, "salt-matt" stock, some rough, some smooth, but every one beautiful in its way. In general it is a pleasure to look at so large a collection without needing to ask a single question or make a single apology. Frequently exhibition work of the "pictorial" class needs both explanation as to intention and apology as to technique. These pictures are perfect in handicraft and admirable in artistic essentials.

Mr. Troth chose to present himself to us as a landscapist and botanist. He claims no credit save as the accurate chronicler of what



Nature gave him. Not a picture shows the slightest evidence of hypothecation or artifice. The tone artist-photographer exercises—needs to exercise—only the prerogative of selection. This Philadelphian does much to contradict the dangerous doctrine which Whistler set forth—that Nature is merely full of hints of beautiful harmonies. Mr. Troth discovers not only “hints” but realizations. He knows the majesty of plain line and of solid mass. The inspiring sweep of shore line, the enticing mystery of long perspective, the eternal stability of granite headlands, the shifting evanescence of wind-swept sand-dunes, the just balance of earth and sky, the relation of the precious unusual to the cheap commonplace—all these things and more he feels and comprehends. Better still, he puts them into his pictures. It is his forte.

There is a peculiar unity in his work. The motif always holds its own, not by virtue of tricks of the “swing-back” or by means of “fogged,” “reduced” or “masked” negatives, but by sheer force of real knowledge in selecting the *partie pris*. It is worth much time to study just this one quality of Mr. Troth's work. But it is difficult to analyze the selective process unless the pictures can be referred to for comparison.

In artistic landscape work there is much room for individual manner, temperament and preference. Some artists see a fog as a phenomenon of color chiefly, others regard it as a mere detail-eliminating aspect of Nature. Obviously the truth lies between the extremes. The night impresses one artist as a mere transposition in the scale of “values”; another sees in it, primarily, diffusion and concealment of lines and masses. To one, color and light are prime, to the other, drawing. Mr. Troth sees landscape about as the normal eye sees it. He portrays scenery literally, but he chooses his view point with signal reference to the sentiments and emotions which the scene engenders in his own heart. If repose be the spirit of the theme he finds therein the lines and limits which have come to be suggestive of Nature at rest. If the resistless force of ocean impresses him he discovers the kinetic lines which universally represent energy in action. His faculty of analysis is superb, and his synthetic power in no degree inferior.

It is doing him no injustice as an artist to dwell on his skill as a camera and darkroom

worker. In the pure and simple operations of “straight” photography he is the peer of anyone. His prints are highly educational in the fundamentals of the craft—right exposure, right development and right printing. And it is a pleasure to find these excellencies uniform throughout so large a collection of truly artistic prints. It greatly modifies our charity for the hit-or-miss negatives from which of late have come too many new-cult “masterpieces.” Occasionally somebody breaks the bank at Monte Carlo—just about as often as a photographic accident produces a *chef d'oeuvre*. The value of Mr. Troth's show is its eloquent plea for perfection of means and methods in the quest for faultless results.

The following excerpt on three stages of the artist, from the *Amateur Photographer* (English), is universal in its application and can be taken as the utterance of an authority upon the subject:

“It is men who change, not mankind.” The advice Sir Joshua Reynolds gave the art students of 1769 is *mutatis mutandis*, most excellent for photography students of 1900. He divides the artist's life into three stages.

“The first degree of proficiency is in painting what grammar is in literature. * * * The power of drawing, modeling and using colors is very properly called the language of the art.” We commend this to those who affect to despise the technical essentials of photography. A knowledge of optics, so far as applies to the ordinary use of lens or pinhole. The chemical manipulations of the plate in the darkroom so as to produce a negative of foreknown quality and characteristics, etc.

The student's second period is that “in which his business is to learn all that has hitherto been known and done. With a variety of models thus before him, he will avoid that narrowness and poverty of conception which attends a bigoted admiration of a single master. * * * The student will not resign himself blindly to any single authority.” That photographers are wonderfully sheeplike in the way they blindly follow or imitate some half a dozen workers is a matter of common observation.

“The third and last period emancipates the student from subjection to any authority but what he shall himself judge to be supported by reason. * * * Having well established his judgment and stored his memory, he may now without fear try the powers of his imagination. He is from this time to regard himself as holding the same rank with those masters whom he before obeyed as teachers, and as exercising a sort of sovereignty over those rules which have hitherto restrained him.”

Mr. J. P. Atwater of the Vive Camera Company spent several weeks in California last month.

Mr. L. D. Hicks left for an extended trip North last month.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

DO WE WANT
A POSTAL
CAMERA CLUB?

It has been moved and seconded that a postal camera club be formed, to be composed of readers of our "With the Amateur" department.

Those in favor of the motion so signify by sending in your name and address, with any suggestions you may wish to make as to aims and methods. The main idea will be the periodical circulation among the members of an album to contain prints, one from each member, accompanied by full detail as to its production. This will lead to an exchange of ideas, and perhaps of prints also. CAMERA CRAFT will gladly furnish the albums. The postage will be about eight cents each time the album is forwarded by one member to the next one on the route list. The success of the scheme will hinge on each member being prompt in furnishing a print for each new album and faithful in his duty as to forwarding the package to the next member within a day or so of its arrival. I would like to hear from all interested promptly. Two names are already on the list, and it ought to be an easy matter to get together enough earnest workers to make the club a success.

PRESERVING
FLOWERS FOR
SEVERAL DAYS

Last winter one of the Eastern photographic magazines, with that desire to be timely that is so characteristic of some of

them, published a translation from the *Photo-Revue* concerning this subject. As I had seen soap and water employed to fill vases containing flowers, and had read of watering plants with borax solution to heighten their color, I made a note of the formula for trial. Make a solution of common salt, three parts; soap, thirty parts; water, one thousand parts. Shave the soap that it may dissolve quickly. When the solution is completed add a little powdered borax. The flowers should be lightly washed before being placed in the vase which has been filled with this solution. They should be removed each morning, the stems well cleaned, the flowers and leaves lightly washed and then returned to the vase, which

has in the meanwhile been filled with fresh soap solution. I tried it last week and the results were more than gratifying. For those who go in for flower studies the hint is an excellent one.

WORKING
FORBES' PLA-
TINOGRAPH
PAPER

One of my readers sends three prints on paper manufactured by A. S. C. Forbes of Los Angeles, and wishes to know what makes them so weak. He has simply taken

them out of the developer too soon. The directions say very plainly that the prints cannot be left in the developer too long. Even all day will do no harm, and yet users of the paper will persist in taking them out at the end of a few minutes, and then wonder why they do not get good prints. The paper should be printed until the shadows just begin to bronze. Do not print for strength. In fact, simply follow directions. The finest prints I have seen for a long time were made by an amateur the first time he tried the paper, but, of course, he followed directions closely. The picture that won first prize in the genre class at our late salon was printed on this paper.

M. MERCIER'S
TREATMENT
FOR OVER-
EXPOSURE

M. Mercier of Paris claims that by his method over-exposures equal to one thousand times the correct exposure can be made to give good negatives. I have

not tried it on plates quite so badly over-exposed, but sufficiently overtimed to demonstrate its value.

Last October I exposed a Pacific plate thirty seconds on a view that would have been fully timed in two. In fact, a duplicate exposure of two seconds gave me a good negative in normal pyro developer.

The thirty-second exposure was soaked about three or four minutes in a two-per-cent solution of tartrate of antimony and potash, commonly known as tartar emetic, rinsed, and then developed in Cramer's bromo-hydro developer. An excellent negative with good contrasts was the result. This developer was used because it was the only hydroquinone

I had at hand, and hydroquinone has always been recommended by those describing the process.

A correspondent in Mexico has PRINTING a negative that gives excessive FROM A contrasts in the print. He does CONTRASTY not wish to tamper with the NEGATIVE negative, as it is not his own, yet wishes to get a few good prints from it. I can only suggest a method that I have heard highly recommended, namely: Make a print from the negative more or less deep as the contrasts to be corrected are more or less pronounced. Attach this to a piece of glass and place it over the negative while printing. The separation should be about a quarter of an inch. The frame should be kept square to the sun while printing. Should the print, being used as a mask, correct the contrasts to too great an extent, remove it just before printing is completed and allow the unshaded negative to give part of its usual contrast.

An inquirer writes me that he COPYING has been given an old pho- AN OLD PHO- tograph that is badly scratched TOGRAPH and covered with small white spots, with the request that it be copied. He wishes to know the best method of securing some passable result. I would advise him to make a negative of about the same size as the original, being careful to avoid harshness. Without trying in any way to improve this negative, make a bromide enlargement from it, with the blacks not too dark. Very little skill will be found requisite in working up this enlargement with pencil and stump. Copied in a good light at the proper angle not to show the gloss of the lead, this enlargement will give a negative that will produce prints indistinguishable from those made from an original negative.

If there is one particularly A PLEA FOR glaring inconsistency con- ODD SIZES nected with the practice of IN PRINTS amateur photography it is the persistency with which its devotees adhere to the sizes and shapes given them by the manufacturers of plates, paper and mounts, while they, at the same time, bemoan their inability to leave out, as can a painter, any undesirable portions of their landscapes or views. I have always credited myself with being unstinted in the use of the trimming-knife, but having, the other day, to fill some particularly odd-

shaped panels in a decorative design, I found that the trimming-knife held possibilities of which I had hardly dreamed. A landscape negative, an 8x10 of a brook with birch trees scattered along each side, has been in my possession for a couple of years, and yet never had more than the first proof taken from it, simply because the light tree trunks did not come together well. They cut the picture into sections in a very disagreeable way. Two of these tree trunks, with a bit of the bank at the bottom, trimmed to an upright of 2x7 inches, made a picture that pleased me better than anything I had done for a long time. Look over your own negatives and see if you cannot find a few of these odd-sized bits that will warrant you in doing some bromide enlarging.

A couple of my readers have TITLES taken me quite severely to task FOR OUR for having recommended, as I PICTURES did in the February number, the use of quotations from the poets as titles to their pictures. One of them habitually bores the admirers of his really good work by using his titles to tell them something they do not care to know. "In Tinkan Gulch," "On Mudflat Marsh," and the like, is about as far as his titles go. The other affects the kiss-me-mother style. "Where Lilies Bloom," "A Shady Dell," and their kind, are his stock in trade. I do not wish to argue the question, but I think that the employment of a little thought would convince any one of the undesirability of using any particular style of title continually. Like a frame, a title may show good taste, may assist the picture, or it may do exactly the opposite.

Speaking of foggy negatives UNSUSPECTED reminds me of an experience LEAKS IN of my own a few years ago. I THE CAMERA had occasion to make a four-plate panorama from the top of Lone Mountain, and borrowing a lens of the longest focus the bellows of my camera would accommodate, I went to work. The lack of crispness in my first set of negatives I attributed to over-exposure, due to using a lens with which I was not familiar. The second set was underexposed, yet still unsatisfactory. My developer, my darkroom light and the plate were apparently all right, so I determined to examine the camera for possible leaks. The result was a surprise. The bellows, an old-style rubber one, was almost like a sieve, when fully extended. When used with

a lens of ordinary focal length for that particular size of plate, very little light entered; but when extended the folds displayed rows of small holes that caused me to wonder that I had obtained any semblance of a negative at all. It cost me eight dollars to have a new leather bellows put in, but I made a set of negatives from the same point that I am proud of today.

Once in a while this question **ARE FIGURES** comes up in my correspondence and it takes a good deal of letter-writing to set forth my ideas. Like the question of titles and their various styles I think it can best be disposed of by employing a little thought. There is no hope of its being settled either for or against. There are too many strong reasons to support both views of the matter. Let us take a few examples of the average landscape class and see if they will not decide the question, each for its own particular case. We have all seen pictures in which well-worn paths and other indications of the proximity of human habitation made the introduction of figures into the view an improvement of decided advantage by furnishing that bit of human interest that one would be all but unmindful of were no figures used. On the other hand, we have a picture of a mountain brook, dashing downward over its rocky bed, almost hidden in the tangle of underbrush amidst the thick tree trunks that indicates the primeval forest. The scene is one of seclusion, of nature as yet undefiled by the woodman's ax. A figure here would seem as out of place as would a piano. As I said before, thought and good taste will settle a great many of these perplexing questions that cannot be disposed of by any hard and fast rules.

An enthusiastic friend, who **THE FOCUS-** employs the most of his leisure **ING CLOTH-** time Sundays photographing **NUISANCE** his three pretty children, has rigged up a little contrivance that adds greatly to his convenience in dodging around between his sitters and the ground glass. It is simply a light framework, resembling a short section of a ladder. This is just wide enough to fit the top of both back and front of the camera, and long enough to extend a little forward of the lens, and about sixteen inches back of the ground glass. Small ears or loops sewed to the focusing cloth permits it to be immediately at-

tached to this framework, giving a good lens shade in front and focusing chamber behind. This does away with any necessity of touching the focusing cloth at all. Last week he added one of those pocket tripod stays to his outfit, and his camera is now as easily moved from point to point in his back garden as the professional's stand is rolled on the studio floor.

A correspondent in Nevada is **USING OLD** having trouble with his blue **BLUE PRINT** print paper. It is next to impossible to get it fresh. He uses **PAPER** it only at long intervals, and does not wish to make his own. I can only suggest that he try the following, which has been recommended as a method of working this kind of paper, when deteriorated by age. Over-print, to the extent of getting greenish shadows. Draw once through clear water, and then reduce slightly in a bath containing a few drops of ammonia. As soon as the lines become clear plunge the print into a bath containing a little oxide of iron salts. Either nitrate, persulphate or chloride of iron will answer, but about one-half of each of the first two in a gallon of water will give the best results. The faded color will immediately change in this bath to a bright blue, while the whites will remain unaltered.

One of my correspondents is **DEVELOPER** troubled with a lack of clear- **FOR FOGGY** ness in his film negatives. The **FILMS** same camera gives uniformly clear negatives when using the plate attachment and the same developer. He attributes his trouble to some chemical condition induced in the emulsion by the film upon which it is coated. The late Charles Ehrmann, noting the same evil, recommended the following developer as one that did away with film fog in a most excellent manner:

Para-amido phenol hydrochlorate...150 grains
Crystallized sulphite of sodium750 grains
Potassium carbonate.....600 grains
Distilled water.....32 ounces
Dilute with from one to two volumes of water.

The reason one of my cor- **TONING** respondents has trouble with **AMERICAN** his toning bath is because it is too strong. He has added too much gold solution. The light **ARISTO** and middle tints overtone, **PAPER** while the deeper shadows hardly tone at all. Aristo can not be toned properly in four or five minutes. A quarter of an hour is about right.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

FOCUSING FOR ENLARGEMENTS

The continual efforts of the manufacturers of photographic paper to produce bromide papers suitable for every class of subject, has resulted in a corresponding increase in the ranks of professionals who use this paper.

One of the difficulties in trying to focus a negative that is rather dense and not very sharp is to judge when the image on the screen is at its best as regards sharpness.

This difficulty can be readily overcome by taking a thick piece of paper, such as comes wound around kodak films, and with a sharp knife making two parallel cuts through the paper, crossing diagonally and punching three or four pinholes in the paper. These cuts and pinholes let fine, sharp rays of light through the perforated paper and, when hung close to and in front of the negative to be focused, makes it much easier and surer to get satisfactory results.

When copying old oil paintings, daguerreotypes, or other indistinct pictures, place a visiting card in script type against the picture, and focusing can be done in half the time.

MAKING CHLORIDE OF GOLD

For several years I have used the following wet process to my entire satisfaction, the only apparatus required being a twenty-five ounce bottle and a five-dollar gold piece. The gold piece is dropped into the bottle, containing a mixture of one ounce of C. P. hydrochloric acid and one-half ounce of C. P. nitric acid. Then set the bottle in the sun so as to allow the gold to dissolve. It should do so in three or four hours, but if it does not dissolve by that time let it stay until the next day.

This acid solution is then neutralized with bicarbonate of soda three ounces, to which four ounces of water has been added, so as to make it the consistency of cream. This solution is then poured into the bottle, little by little, so that the effervescence which takes place does not cause an overflow. After each addition it must be shaken around in a circular manner so as not to spill any, as the stopper must be left off, so that the carbonic

acid gas which is evolved may escape freely.

By the time most of the bicarbonate of soda has been used up it will have ceased to effervesce. However, a little more should be added, so as to neutralize all of the acid and make it decidedly alkaline.

An olive green precipitation will settle at the bottom, which is the alloy of copper and silver that was in the coin. These metallic chlorides are not detrimental. They must be redissolved by pure nitric acid, which is added a few drops at a time until effervescence ceases and the precipitate is redissolved. The solution is now bright yellow, and perfectly transparent. It should then have a decidedly acid reaction, which gives it keeping properties, otherwise the metallic gold would be deposited on the bottom and sides of the bottle. This clear, acid solution can now, by the addition of water, be reduced to any strength that may be desired. The strength that I prefer is a little more than one grain to the ounce.

SIMPLE ENLARGING BOX

The other day I dropped in on my friend Harris of the Miniature Portrait Company, and was shown a novel and very practical enlarging apparatus about which I had already heard a great deal. The scheme is decidedly simple. The principal thing being a new 14 x 17 back-focus portrait camera. The front board holding the lens was rigid. This was taken off, reversed, and fitted to the running gear, where at first the back end of the camera traveled. This part was then made stationary to the baseboard, and placed against the window. Between it and the camera the plateholder slides, which is adapted to take the various sized negatives.

The parallel tramway is inclined at an angle of about forty-five degrees, upon which the vertical board to which the bromide paper is attached can be moved to and fro. By this means the size can be regulated quickly and accurately. The fine focusing is then done by a lever attached to the lens board. In the same room with the camera are the large developing and water trays, some of them nearly six feet long.

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK
CONDUCTED BY H. D'ARCY POWER, M. D.

PERSULPHATE OF AMMONIUM REDUCTION

For the past two years the anomalous action of this salt has been the subject of constant discussion in the photographic journals of the world. That the densest deposits should be attacked more vigorously than the thinnest seemed inexplicable, and the explanations offered were successively shown to be untrue or inadequate. At last it would seem that the real cause had been discovered. From the investigations of Dr. Luppó Cramer, reported in *Liesegang's Wochenschrift*, Vol. 27, No. 13, it appears that ammonium persulphate dissolves the gelatinous base of the silver image, and that this solvent action, however, is not exerted on pure gelatine, but only on that mixed with silver, and that the more silver there be the greater this solubility becomes. Hence the thin deposits in the shadows remain unaffected, but the dense highlights afford enough silver to make the gelatine very soluble, and thus leads to their removal. The explanation is as simple as it is satisfactory, and is verified by independent experiment.

A NEW METHOD OF WORKING GUM PRINTS

Dr. Simons of Munich has a lengthy and valuable paper on the gum bichromate process in the *Photographische Rundschau* for March. He describes a new method of preparing the paper. He makes three solutions:

No. 1.—A hundred cubic centimeters of moist color in tubes is mixed with 50 c. c.

of water, well shaken and stored in a well-stoppered bottle. He advises three colors to be so prepared, viz., English red, burnt umber and caput mortuum.

No. 2.—A gum solution composed of equal parts of gum and water.

No. 3.—A twenty-five-per-cent solution of ammonium bichromate. This is stated to have much better sensitizing qualities than the potassium salt.

These three solutions have good keeping qualities. To prepare the paper take one part of the gum solution, one part of the bichromate and seven parts of the color solution. Mix well and spread in the manner usually directed. The paper should be dried in about a quarter of an hour, not less. The paper is best used on the day of its preparation. In the matter of ease and certainty this method would appear to have considerable merit to commend it.

CAMERA CRAFT would like to hear from those who investigate.



BY DR. E. G. EISEN

THE FISHERMAN

WHEN IS A PLATE FIXED?

In a report to the technical committee of the Photographic Society of Philadelphia (see *Wilson's Photographic Magazine* for March), Mr. Prescott Adamson reports the results of a number of experiments made to determine this important point. The results are somewhat startling. For years we have been told that on no account should we remove the plate from the hypo until at least ten minutes after all white deposit had disappeared, and only this month one of our best-known writers reiterates in a professional

magazine the advice to use two baths, lest some of the dreaded double salt remain insoluble. Mr. Adamson took unexposed plates and, placing them in a one-in-four hypo bath, found that they became clear in seven minutes. Then, without waiting the conventional ten minutes or using a second bath, he immediately washed them, and found by analysis that not a trace of silver remained in the film. The double salt had dissolved just as rapidly as it had formed. Other experiments, however, showed that this immediate solution does not occur with weak hypo solution. Safety, therefore, does not lie in long fixing or double baths, but in strong hypo. With a one-in-four bath the plate is fixed as soon as it is clear.

THE INFLUENCE OF EXPOSURE ON PICTORIAL EFFECT

Last month I referred to the question of exposure in connection with tank development. Since then I came upon an article (*English Amateur Photographer*, No. 855), with the above heading, by Mr. C. H. Hewitt. It is a commentary on four illustrations taken from four plates rapidly exposed, one after the other, on the same subject (a landscape with stream and houses), for periods of one-sixth second, one-half second, two seconds and ten seconds. Notwithstanding that No. 4 had sixty times the exposure of No. 1, they were all good pictures, although the impression they convey is different. To use the author's words, No. 1 (one-sixth second) "suggests evening after the sun has gone down, but while it still lights up the clouds;" No. 2 (one-half second) "is more like that of a rather keen March day, not very windy, and with a good light, but not direct sunshine;" No. 3 (two seconds) "is the print which best conveys the impression of the view," namely, the early afternoon of a December day, with sunshine; No. 4 (ten seconds) "is something like what one might have expected had there been a slight mist." I would advise those who have access to the publication to see the reproductions of these prints, but even the description indicates the latitude we have in exposure and the possibilities it offers in modifying pictorial effects.

RETOUCHING

In the *Professional and Amateur Photographer* for April Mr. Bigelow points out the advantages of retouching from the back of the negative. His method is to coat the glass

with a varnish composed of six parts of colloidum and two parts of Hammer's retouching varnish, and to work on this surface by haphching. It is easy to see how valuable this would be for broad effects or reinforcement of work done on the surface of the film.

DAYLIGHT ENLARGING

The making of bromide and carbon enlargements is carried on much more extensively in England than here, and a glance at the advertising pages of any of the English journals will show the great commercial importance to which it has attained. It is, therefore, not without value to note the salient points of an editorial on the subject in the *British Journal of Photography* of February 22d. The writer first declares for daylight as the illuminator on the ground of greater certainty in equable distribution of the light. Contrary to what I am inclined to believe is the general belief and practice of amateurs, it is furthermore insisted that there is very little latitude in the matter of exposure, that is, if first-class results are looked for. "Pure high lights and good shadows can only be obtained by closely watching for the right time in exposure. Over-exposure means nasty greenish yellow, and under-exposure means general weakness of image, with poor, weak densities in the shadows." Speaking of sharpness, it is maintained that the lack thereof is most frequently the result of a want of *absolute parallelism* between the *lens* and *negative*. "The worker will do well to experiment in this matter and see how small a lack of adjustment of the lens to the true plane of the negative will throw the image out of focus." It is not always easy to say when a negative really is in focus, and I never trust my judgment in this matter, but secure the focus with a transparency I keep for the purpose, made from an optician's card with prints of several sizes on it. Finally, the writer in the *British Journal* declares against brush development. Says he: "Development by the brush is a particularly nice parlor or classroom experiment to show to amateur workers, and for small sizes often yields nice results, but when working on large images it is fatal to high-class results." We are also warned to be sure that the print is *equally* wet when soaked prior to pouring on the developer.

Cloud photography is the subject of the April number of *Photo-Miniature*, Mr. O. I. Yellott being the writer.

THE PHOTO-MICROGRAPHER

CONDUCTED BY
THEODORE KITKA

It was only after much trouble that I induced Professor Mitchell to write the article which forms the chief feature of this department, but I feel that I am amply repaid by its value to the beginner in photo-micrography.

PHOTO-MICROGRAPHY WITH LOW POWERS

BY GEORGE OTIS MITCHELL

To the microscopist, whatever be his special line of work, the camera affords the easiest, and in most cases the most faithful, means of recording his observations; with low and medium powers, say up to one-fourth or one-sixth-inch objective, the most faithful. In cytological work under high powers, it is generally impossible to confine the field to the single focal plane desired, and confusion and possible error may result.

Any one possessing a good microscope and a view or folding camera adapted for the use of plates is equipped, with the assistance of a little ingenuity, to make photo-micrographs with powers up to certainly a one-fourth-inch objective. The most convenient arrangement is with the microscope tube horizontal and the camera blocked up so that the tube of the microscope will enter the opening left in the front board on the removal of the photographic objective, all extraneous light being shut out by several turns of soft black cloth or listing. Care must be taken that the focusing screen is perpendicular to the axis of the microscope. The specially constructed camera, with great extension of bellows, is naturally much better, as it allows greater magnification to

be obtained without the curtailment of the field necessarily attendant upon the use of a higher objective. To some extent this trouble can be overcome with the short-bellows camera by the use of eye-pieces, either the ordinary oculars or the special projecting eye-pieces offered by some microscope makers. The writer prefers, however, to work without an eye-piece whenever possible. He has taken some excellent negatives, though, of difficult objects, such as *pleurosigma angulatum*, showing the reso-

lution very clearly, with the customary "A" ocular.

For low-power work the light from a good oil lamp is sufficient, placing it at a distance of about a foot or eighteen inches from the stage, being careful to have the flame in the axial line and turned *edgewise* to the object. A Welsbach burner or an incandescent electric lamp at a distance of two feet gives good results. The writer uses for his low-power and medium work a 50 C. P. incandescent lamp known as a "focusing" or "projecting" lamp, in which the filament is wound into a close spiral about the size of a dime. This can be used much nearer the object than when the source of illumination is spread over a larger area, as even illumination of the field can easily be attained without the loss of intensity consequent upon a greater distance. The illumination above referred to is for transparent objects, taken with transmitted light. For opaque objects the light must naturally be thrown upon the upper surface, and generally must be concentrated by the employment of a



PROF. GEORGE OTIS MITCHELL
President San Francisco Microscopical Society
Photograph by Dr. Gustav Eisen

condensing lens, a parabolic side reflector or a lieberkuhn.

Sharp microscopic focus cannot easily be obtained with the usual ground-glass screen. This is necessary for locating the image and rough focusing. The screen should then be removed and a focusing-glass used. The simplest and best form can easily be made. Take a strip of half-inch, well-seasoned wood, two inches wide and six or eight inches longer than the camera back is wide. Through the center of this bore a hole, into which the tube of a low-power eye-piece will tightly fit. To adjust this to the plane of the plate, focus the camera with its ordinary photographic lens upon some sharply defined object—a page of printed matter in good light is excellent—until the image is as sharply defined upon the ground glass as possible. Remove the ground glass, rest the wooden strip against the camera back, with the tube of the eye-piece projecting into the camera, apply the eye and slip the eye-piece backward or forward until the image seen is clean cut. Its focal plane will now coincide with the plate when exposed in the holder.

Unless the subject and the degree of amplification are such as to greatly prolong the time of exposure, slow plates, as Seed's 23, or even Carbutt's B-16, are to be preferred. For the majority of work the writer has found little or no advantage in the use of orthochromatic or isochromatic plates, either with or without a ray filter. To obtain the sharpest results plates should be backed with some one of the backing compounds. The Acme halation destroyer papers have been found convenient and cheap.

A developer should be used which will give good density without too prolonged development, as sharp, clean-cut negatives are desired rather than soft ones. Glycin gives sharp contrasts and the greatest density. Adurol gives nearly the same density, but preserves the half tones much better and has an advantage in that it can be used over and over again. It never stains, and when it becomes muddy it can be filtered, and, when nearly exhausted, the addition of a little fresh concentrated developer, in the majority of cases, renders it even better than when freshly mixed.



BY PROF. GEORGE OTIS MITCHELL

FLEA



BY PROF. GEORGE OTIS MITCHELL

FLY'S TONGUE

Prints should be made, especially if for reproduction, upon a smooth-surface paper, such as solio or rex of the printing-out papers, or glossy velox or enameled bromide of the developing ones, as it is necessary to keep the fine details upon the surface. For uniformity of results the writer prefers the enameled bromide, hard or soft to suit the negative, as the disagreeable factor of streaks and "pencil markings" is much more easily

controlled and removed than with the glossy velox.

The negatives of the subjects accompanying this article were made with objectives ranging from 4" to 1" focus, without eye-piece, substage condenser or bullseye, and with the "projecting" incandescent lamp mentioned above, required exposures varying from two seconds to fifteen seconds, according to the density of the chitinous

portions of the subject and the objective employed. None of these plates were backed, but some of them, especially the fly's tongue, would have been improved if they had been, as the marginal hairs would have been sharper. They form part of a series taken for the illustration of a text-book upon entomology now being published.

Photo-micrography with high powers, involving the use of the substage condenser, merits a separate article. The writer has endeavored simply to call attention to the fact that good results can be obtained without the use of elaborate special apparatus.

A FAMOUS SCIENTIST

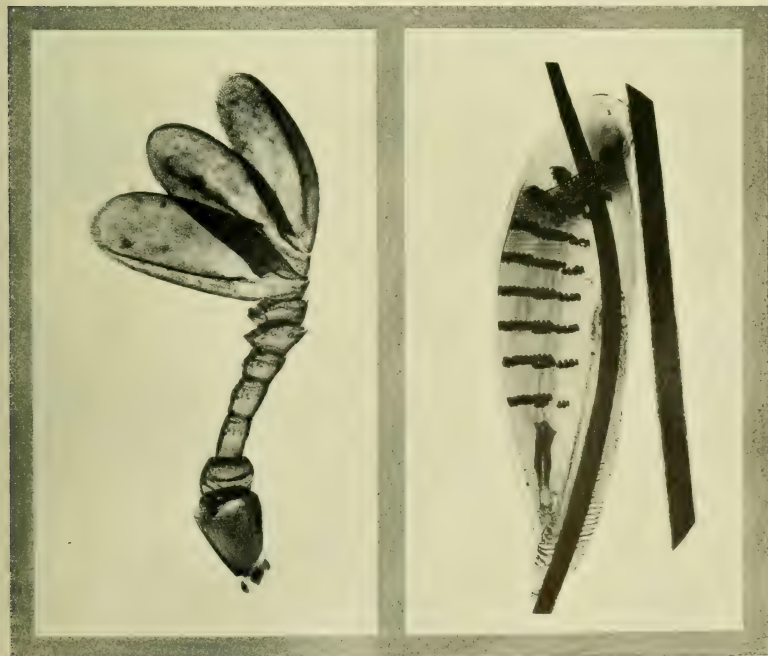
The Belgian Government has sent a noted cytologist to our shores in the person of Dr. H. LeBrun, who is the director of the Museum of Natural History at the University of Louvain, Belgium. Several years ago Dr. Gustav Eisen called the attention of the scientific world to the abundance of various batracoseps found mostly in the Bay of San

Francisco, and it is to study these that the noted scientist comes.

HALATION

A recent editorial in the *Photographische Rundschau*, on the subject of halation in micro-photography, is of interest to photographers at large, inasmuch as the editor maintains that isochromatic plates are proof against halation without backing, the reason being that the actinic rays are all absorbed by the dye with which the film is saturated, and the reflected rays being red or orange have practically no effect. This is certainly theoretically true, and by comparing a goodly collection of negatives on both ordinary and isochromatic plates, I find that windows and trees against the sky show little halation on the isochromatic plates. The subject is worth careful testing,

The next meeting of the Microscopical Society will be held on May 1st, when Dr. LeBrun will give a short summary of his investigations on this Coast.



BY PROF. GEORGE LTIS MITCHELL ANTENNA OF BEETLE

EGG OF BOT-FLY ON HORSE'S HAIR



BUSINESS NOTES



G. Gennert announces that he has made arrangements with Messrs. Hoechheimer, the manufacturers of bichromate papers, for the United States agency for their products. This paper comes in four colors, engraving black, warm black, gray and sepia. An assortment of Nos. 1, 3 and 4 will be received within the course of the next two weeks, together with sample packages, each containing nine sheets, 10 x 12, assorted colors. The price of the paper will be three dollars per yard, thirty-two-inch width; sample packages of nine sheets, 10 x 12, four dollars.

The trade will be interested in two new products of the Mallinckrodt Chemical Works, St. Louis, sodium sulphite and sodium carbonate, for which are claimed exceptional purity and strength. Circulars will be sent upon application.

Users of the Actien-Gesellschaft fur Anilin-Fabrikation developers will be pleased to know that they are now being sold in glass tubes instead of the old cartridge form. Over eighty thousand copies of the little book printed by this company have been distributed in the United States. Copies can be had at all dealers.

A new device that will prove of interest to every user of a camera is Nicholson's adjustable lens shade, made by the Jackson Lens Shade Company of Jackson, Miss. It is a simple little attachment which can be applied to any form of camera and removed in an instant when not needed. The object of the lens shade is to protect the lens from the rays of the sun and other strong or reflected light. By its use you can photograph directly toward the sun between nine and three o'clock.

A recent addition to the line of F. L. Schaffuss & Co., 94 Reade Street, New York, is the "Deckle-Photone" albums. The trade, for some time past, has needed an album of this style. The edges are "deckled," the cover being gray in tone. Each album is bound together with silk floss and has a handsomely embossed cover. They are made in

two sizes, 8 x 10 and 11 x 13 inches, and each album comes separately boxed. The new shade of carbon black is being used by this firm in their "Star Plain Leaf" and "Star Photone" albums.

Messrs. Burke & James, Chicago, are now located in their new quarters, 118 to 132 W. Jackson Boulevard. The change was rendered necessary by the need for increased space.

The Heinn Specialty Company, makers of albums, have placed on the market two new albums, the new Badger Flexible and Badger Extensible albums, destined to become universally popular.

The notable features of the Badger Flexible Album comprise an entirely new method of binding, which permits of perfect flatness when opened at any page; the leaves come together flush at the hinges and the stubs used to extend the back of the book are entirely concealed. They are very flexible and very light. The leaves are made of thin but strong Melton-finished stock of an excellent quality, in khaki brown, gobelin blue, ash gray and stone gray, all new and attractive shades.

The Badger Extensible albums have a rigid but extensible back and the popular thin leaf. The leaves are interchangeable and extra leaves can be added. All of the new shades are shown. Each leaf is scored at the hinge point and the albums will open perfectly flat at any page, the leaves coming together flush at the hinges.

G. Gennert, New York, has placed on the market several novelties of great merit, among them being the Montauk focusing back and the Montauk focal plane shutter. Both of these novelties are fully described in an illustrated circular, which will be sent to all those interested.

The newest thing in lenses is the Bausch & Lomb plastigmat f-6.8. For speed, covering power, brilliancy, permanency, compactness and absence of astigmatism it is claimed that this lens has no equal. A new booklet on "Lenses and Glass" has been issued by the makers for free distribution.

NEWS OF CLUBDOM

CAMERA CRAFT IS THE OFFICIAL ORGAN
OF THE CALIFORNIA CAMERA CLUB,
THE SAN DIEGO CAMERA CLUB, AND
THE PENDLETON (ORE.) CAMERA CLUB

CALIFORNIA CAMERA CLUB

The following officers were elected at the annual meeting of the California Camera Club: President, J. W. Erwin; first vice-president, W. B. Webster; second vice-president, H. B. Hosmer; secretary, W. E. Palmer; treasurer, Dr. E. G. Eisen; corresponding secretary, C. E. Ackerman; librarian, I. O. Crosscup; directors—A. L. Coombs, John J. Lermen, Charles A. Goe and H. T. Henning.

President Erwin has named the following standing committees:

House—W. B. Webster, J. R. Gwynn, H. T. Henning.

Exhibition—Dr. E. G. Eisen, C. A. Goe, Dr. Thos. Fletcher.

Auditing—H. T. Henning, E. J. Dollard, Dr. M. A. Greenlaw.

Demonstration—J. J. B. Argenti, Dr. H. D'Arcy Power, A. L. Coombs.

Lantern—A. G. McFarland, W. E. Goodrum, L. E. Rea, T. H. d'Estrella, Dr. E. G. Eisen.

Print—A. L. Coombs, F. J. Clute, C. W. Thompson, I. O. Crosscup, F. O. Bratton.

Election—C. A. Adams, W. J. Street, C. S. Close, W. O. Bacon, F. J. Clute.

Outing—W. J. Street, H. B. Hosmer, J. J. B. Argenti.

Electricity—F. E. Smith, W. C. Mackintosh, L. D. Hitzeroth.

Entertainment—Chas. A. Goe, B. D. Bent, G. A. Gwynn.

Reception—I. O. Crosscup, J. H. Wilhelm, E. E. Erbe, W. B. Webster, J. T. Nash, W. E. Goodrum, Dr. W. F. Barbat, C. E. Ackerman, F. C. Bangs, C. W. Callaghan, W. E. French.

The report of the officers was very gratifying, the financial condition of the club having been shown to be the best in years.

LOS ANGELES CAMERA CLUB

Friday, April 5th, was a red-letter day in the annals of the Los Angeles Camera Club, it being the occasion of the visit of President Erwin of the California Club. In the evening Mr. Erwin gave a delightful lecture on "The Land of the Chino, the Jap and the Philippino" to a large and appreciative audience.

The lecture was delivered in Mr. Erwin's usual happy vein and was frequently interrupted by applause. The slides were beautiful, many of them being artistically colored. Mrs. Florence Amy Young of the Los Angeles School of Dramatic Art gave several pleasing selections, responding to a hearty encore with a reading from one of Mr. Dooley's talks. Excellent music was furnished by the "Boxer's" Orchestra.

The nomination of officers for the ensuing year was the order of business at the last regular meeting. Most of the old board of directors were renominated, together with many new names. Nominations will be closed at the next meeting, after which the names of the nominees will be posted on the bulletin board, the elections taking place in May. At the conclusion of the business meeting Mrs. J. Torrey Conner gave an illustrated talk on "Places I Have Seen." The pictures embraced some Italian scenes, views from the Paris Exposition and Mexican scenes. The club orchestra rendered several pleasing selections.

WASHINGTON CAMERA CLUB

At a meeting of the amateurs of this city, held at the Y. M. C. A. rooms on the evening of March 28th, the organization of a camera club was effected with sixty charter members on the roll. The club will be incorporated as "The Washington Camera Club, of Seattle, Washington." The by-laws provide for three classes of members, active, associate and honorary.

It is the desire of the organizers to offer to the amateurs of the State a home or center for them to meet fellow-workers, and the hope is that all residing out of the city will come with us where they have no home club.

Rooms have been engaged in the Union Block, which is probably the most central place in the city for the members. These rooms will be put in condition to attract the members and be of use in the work. It is the purpose of the club to keep on salary a librarian, who will act as instructor and have full control of the rooms.

The following officers and trustees were

elected to serve until the next annual meeting: Chas. E. Crane, president; H. E. Holmes, first vice-president; Mrs. Charles Denny, second vice-president; E. H. Wilder, secretary; Miss A. M. Appleton, corresponding secretary; J. C. Harris, treasurer.

The above-named officers, together with the following three members, compose the board of trustees: E. Morganstern, N. W. Huggins and Charles Kinnear.

The regular meetings of the club are to be held the second Tuesday in each month, with the annual meeting the second Tuesday in March.

SAN DIEGO CAMERA CLUB

At the last meeting of the club Mr. E. L. Rector presented his resignation as secretary. Mr. Rector has been transferred to the San Francisco office of the Western Union Telegraph Company, and his resignation was accepted with many regrets. In consideration of his valuable services as organizer of the club and his untiring interest in the work both he and Mrs. Rector were made honorary members. The vacancy thus created was filled by the election of Professor F. W. Kelsey as secretary, and Professor Kelsey's position as treasurer was filled by the

nomination and election of Dr. W. G. Gregory, United States Army. The subject of using matt-surface papers was discussed and a great many useful ideas were contributed by the members present.

A camera club with a large membership has been started in Rossland, B. C.

On April 14th the amateurs of Everett, Wash., perfected the organization of a camera club. Mr. M. L. Hudson was elected president and Miss Katherine Case, secretary and treasurer.

A gun, rod and camera club will shortly be organized in New Westminster, B. C.

The Camera Club, recently organized in Riverside, Cal., is now at home in the Loring Block. Darkrooms have been erected and the club bids fair to be one of the most progressive on the Coast.

The second annual print exhibit of the Alameda Camera Club, March 12-17, was by far the most successful ever given across the bay. Many San Francisco photographers exhibited, but the work of the members was far above the average.

Pictures of the President

Let us develop and print your pictures taken during President McKinley's visit. Our enlarged quarters furnish ample facilities for increased and rapid work

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Kodaks, Cameras, Photo Supplies

WANTS

Free to those seeking employment.

Three lines, one insertion, 50c. Three insertions \$1.00.

Wanted—Position as operator, retoucher, carbon or platinum printer. California preferred. Would rent studio with privilege of buying. Address Operator, care CAMERA CRAFT.

A1—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

For Sale—A floating gallery on the Columbia River with entire outfit for portrait and view work. Have been working river towns between Portland and Astoria, Or. Price reasonable. Call on or address Wm. B. Rush, Clatskanie, Or.

A thorough photographer and a hustler desires position at any branch of the work. Outside work preferred. Hustler, care CAMERA CRAFT.

For Sale—A newly furnished photographic gallery in San Francisco. Cause of selling, parties desiring to leave the city. Can be purchased at a very low price. Address, C. P., CAMERA CRAFT office.

\$350 Cash—Will buy a modern, well-furnished Studio in the Mission, San Francisco; \$650 worth of apparatus and furniture in sight. For particulars address L. D. Hicks, 220 Sutter Street.

A GOOD EXCHANGE MEDIUM
FOR AMATEURS



BY ARTHUR HEWETT, ORANGE, N. J.

“WITH THE DAISIES AT NOONTIDE’S BRIGHT HOUR”

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. III.

SAN FRANCISCO, CALIFORNIA, JUNE, 1901

NO. 2

My Recollections of Daguerre by Gus. Henriod



*Illustrated with one of the oldest
daguerreotypes in existence, the
property of the writer*

GUS. HENRIOD

I first met M. L. J. M. Daguerre in the early part of the year 1840, in my native city, Le Havre, France. M. Daguerre, at that time only an obscure little Frenchman, came to my father's home and asked to be taken in as a boarder. My father was a marine insurance writer and had a large house in the Rue d'Orleans, so that M. Daguerre was easily accommodated. Although I was at that time only a boy, some impressions of that early acquaintance with the man destined to give photography to the world still linger in my memory.

One morning at the breakfast table M. Daguerre amused the family by describing a curious experience that had occurred during the night. He said that he was lying awake in bed when he was attracted to reflections of people and carriages on the ceiling above him. The figures seemed to be moving in an endless procession, and for a moment M. Daguerre said he thought that the room was haunted. Being naturally of an investigating turn of mind, he sought for a solution of the mystery. Noticing a small shaft of moonlight that came through a knothole in a shutter, he placed his finger over the hole and the procession on the ceiling stopped. Taking his finger away and admitting the light again, the procession immediately began to move. "There lay the mystery," said M. Daguerre. The figures were passing along the street and their shadows were projected through the knothole, every other crevice through which light could penetrate being stopped up.

This experience started M. Daguerre upon a series of investigations which eventually resulted in the birth of photography. The little man conceived the notion that the images, such as he had seen, could be fixed on a plate and made permanent. He set to work with this end in view and

published notes of his discoveries from time to time, which created laughter at his expense.

M. Daguerre had been working on his invention for some time when he called me into his service. I was then but a lad of eight or nine. He asked me to sit for him while conducting his experiments, and so I became his model. Oftentimes weeks would elapse between sittings, during which time the inventor would work assiduously to surmount the difficulties of rendering his plates more sensitive and expediting proper duration of "dark box."

My recollection of rather vague, except representation of M. Daguerre called *scure*. It could not the image, and to sary to move the until the proper dis-

The only products were silhouettes, face, and for weeks only appear as a Neither eyes, nose discerned in the plate which was



ONE OF THE OLDEST DAGUERREOTYPES IN EXISTENCE

sitive and experi- proper duration of "dark box."

his appliance is that it was a poor the present camera. it the *chambre ob-* be adjusted to focus focus it was neces- subject to and fro tance was located. of my first sittings both profile and full my picture would shadow on the wall. nor mouth could be black form on the oftentimes fogged.

ment on the part of

As the least move-

the subject during the long and tedious sittings, oftentimes not less than ten minutes, would disfigure the picture and produce a blur upon the plate, you can imagine my discomfort after several sittings. Oftentimes I moved during the exposure, and the figure on the resulting plate appeared as a phantom clothed in a heavy mist, thus spoiling the plate and chemicals. Although, as I remember M. Daguerre, he was a most mild-mannered man, these failures often reduced him to a state of frenzy, yet in a few moments he would recover and again set to work.

To the best of my recollection it was eight or nine months, perhaps more, before M. Daguerre succeeded in producing a likeness of his model that could be recognized. The posing became at times dreadful and often exceedingly painful. My eyes would twitch and become almost uncontrollable from fear of winking too often, while my breathing had to be done with great care and with the least possible movement of the chest. Notwithstanding all these obstacles, M. Daguerre's hopes and anticipations were at last rewarded with success, and those who had scoffed at him were the first to congratulate him when he announced the result and exhibited specimens of his work. When he had produced a fair likeness of me he was the happiest man you ever saw. He threw his arms around me and forced me to dance with him in his joy.

Thus, although only a small boy, I was associated with M. Daguerre in laying the foundation of a beautiful science which, I believe, has made more

progress in the last sixty years than any other science evolved in a similar period.

The French government, shortly after the result of M. Daguerre's work was announced, bestowed upon him a yearly pension of six thousand francs during the term of his life, half the amount to go to his widow should she survive him. The process, thus having been made public without reservation whatever from the French government, became public property throughout the world. I carefully preserved two specimens of the original plates taken by M. Daguerre and brought them with me when I came to the United States, but the exposure and handling during the past sixty years has completely effaced every trace or vestige of their former appearance, until not a form of human resemblance is visible. The only relic that I treasure is the small picture of my brother which accompanies this article.

I have written this short story of my acquaintance with M. Daguerre during the days of my childhood cheerfully, and my acquaintance, friendship and respect for him pleasantly linger in my memory. I believe that I am the only survivor claiming to have sat as his model, and I am now fast speeding past the mark of three score and ten.

TONING AND INTENSIFYING BROMIDE PRINTS

Professor Namias publishes a new method of combined intensification and toning of bromide prints in the March number of the *Bulletin of the Italian Photographic Society*, for which he claims most excellent and permanent results. The prints are first bleached in the following bath :

Mercuric chloride.....	2 grams
Ammonium chloride.....	5 grams
Hydrochloric acid.....	1 c. c. m.
Water.....	100 c. c. m.

This operation requires from three to five minutes, after which the prints are washed and toned in a bath of

Ammonium sulphocyanide.....	2 grams
Water.....	100 c. c. m.
Solution of chloride of gold 1 per cent.....	10 c. c. m.

The result is a fine violet-black with considerable intensification. Where a pure black tone is required the use of an ordinary developing solution, preferably metol-hydrochinon, is advised in place of the gold. The result is a velvety black tone. While this is probably sufficiently permanent, it can be made absolutely so by transference to a bath of

Chloroplatinite of potassium.....	1 gram
Oxalic acid.....	10 grams
Water.....	1000 c. c. m.

Of the two, best results have been obtained with the metol-hydrochinon. This redevelopment converted inefficient and perfectly useless proofs into prints of pluck and brilliancy, with pure whites and rich, velvety black tones. These results were obtained with both royal bromide, Eastman's standard A and velox. Taken all in all, it is both the best and most tried.



THE BAY

THE CHARM OF STEREOSCOPIC WORK

BY H. G. PONTING

ILLUSTRATED BY THE WRITER

It has always seemed strange to me why so beautiful an art as stereoscopic photography should ever have been permitted to fall into the comparative oblivion from which, after a generation's sleep, it is now awakening. In Europe it has never lost its hold on the public as it has in the United States, and most of the best stereoscopic work still comes from the continent, chiefly from France and Germany. It is an anomalous feature, however, that while the art has so declined in this country, yet some of the greatest stereoscopic view publishers in the world are in America. They find their best market abroad, although the present revival, which is steadily growing, will undoubtedly bring them a large business at home.

Most of us can remember the old box-form stereoscope and collection of views with which, when we were children, our mothers were wont to bribe us in the evenings to that state of rest and silence which, doubtless, their nervous systems stood badly in need of. So, long before we thought that, some day, we too would be deriving our keenest pleasure and recreation in photography, these views held us spellbound.

If, in those early days, we took such pleasure in the living beauty of a stereoscopic photograph, should we not take infinitely greater pleasure in such views now that we have gone through the mill ourselves and learned what a labor it is to secure a coveted picture? Labor — yes, but a labor of love to the serious worker who carefully lays his plans and watches, sometimes weeks, for the effect he has in mind, and when at last he has secured the result he has longed for, with what pleasure does he contemplate his creation.

Yes, we have gone through it all, and yet in all these years that we have been expending far more than we could afford on plates, papers and various

developers, many of us have not even so much as glanced at a stereoscopic photograph.

To those of us who have and have had the good fortune to see some really good views, surely as we gazed, fascinated at the beautiful solidity and relief, we must have felt the desire to produce ourselves, in that form, such subjects as have appealed to our interest or artistic sense. And why not? No branch of photography can be more entertaining to our friends, and as time goes on we will look over these views with an interest we have never known before in our work. The scenes and figures are brought back with such life-like reality that it is almost startling to take up a stereoscopic photograph which has not been looked at for some time. One seems to go right back to the actual place itself, so vividly is the scene recalled.

There has doubtless been many reasons for the decline of the art. It has fallen into disrepute largely through having been grossly abused. Many people only associate it with the vicious perpetrations which may be seen in certain shops in most cities, where rows of two-eyed machines disclose their vulgar secrets to the seductive influence of a nickel, while a graphophone wails out a rasping accompaniment that bears some faint resemblance to the latest popular music-hall melody. The stereoscope has been eagerly seized upon by the proprietors of such places as a means of lending a sensuous reality to these productions which they would otherwise not possess, thereby insuring a ready patronage by those whose depraved taste leads them to prefer such subjects.

Another reason for the decline of the popularity of the art has undoubtedly been the absolute disregard, by publishers of transparencies and views, of even the elementary rules which govern the principles of binocular vision. As a glaring example of this ignorance, I may mention the views on exhibition at one of the popular places of amusement in San Francisco. Many of these views are beautiful transparencies, with a great charm about them, excellent



WALLACE

in technique and finish, while others are mounted at such a distance between similar points in the two views that I found it impossible to make them coalesce. Such views are utterly worthless and only serve to discourage those who painfully strain their eyes in the vain effort to combine the two pictures.

I pointed out the errors in some of them to the man in charge several months ago, and on being shown the slides I found that in some cases the pictures were separated as much as four inches between similar points, while in other cases he had mounted two lantern slides side by side. I explained to him that this would never give the desired effect, as it was necessary to use two distinct pictures from negatives made from slightly dissimilar points.

This is one of the fundamental principles of stereoscopy, and no way has yet been evolved to do away with it. Many people have the impression that a stereogram is merely two prints mounted side by side. This is an error, as a view produced in that way would have no more solidity than a monocular photograph seen through a graphoscope.

In ordinary vision the respective images of an object formed upon the retinas of the two eyes differ slightly because of the divergence of the rays from each point of the object. Each eye, therefore, sees a separate and distinct representation of it. The brain, however, consolidates these two views into one, with the result that the scene has a relief imparted to it which is lacking if only one eye be used. In the case of distant views this effect is not noticed, but is greater in proportion to the nearness of the object.

The stereoscopic camera, with its twin lenses, serves the same purpose as do the eyes. Take an object in the foreground which is in line with something in the distance, close one eye and note closely the relation of the two, then close the other eye and mark the difference. This fact will be noted that the left eye sees a little more around one side, and the right eye a little more



READING WAR NEWS BEFORE THE GREAT JOSS HOUSE

around the other side of the object, and that causes the appearance of relief.

One of the primary rules of stereoscopic work is that similar points in the two views must not be more than three inches apart. Some people find difficulty in combining the two at three inches, and two and a half is a better standard, insuring success. In my own use I have adopted two and three-quarter inches, and this is, perhaps, the best of all, as it does not sacrifice an unnecessary margin of print and renders the coalescing easy and natural.

In the stereoscopic camera the distance between the two lenses is exaggerated a little in proportion to the distance between the eyes, as in practice this increases the effect greatly. A good standard separation is three and a quarter inches. For average work this distance is excellent and will but seldom need to be changed.

For those who wish to treat thoroughly every variety of subject, from open views down to three or four feet, this standard may be departed from. For a subject six or seven feet from the camera two and one-half inches is ample. It will give sufficient relief, without offensive exaggeration, as would be the case if a wider separation was used. For a view with no details in the foreground, and where it is desirable to get all the relief possible, a separation of four inches may be used to advantage. A wider separation than this cannot, as a rule, be used on a 5×7 plate. I use a Thornton-Pickard behind the lens shutter, which admits of the lenses being used at various separations.

For all ordinary use, however, a standard of three and one-quarter inches is right.

Stereoscopic photography is, by its very nature, a work every detail of which should be attended to by one individual. Success cannot be obtained by merely exposing the plate and leaving the rest to someone else. There are too many niceties to be watched in the various manipulations, each one, however, quite simple and only requiring a little care. A few simple rules are all that need be observed to distinguish stereoscopy from ordinary photography.

A pair of perfectly matched lenses must be used, operated by a shutter



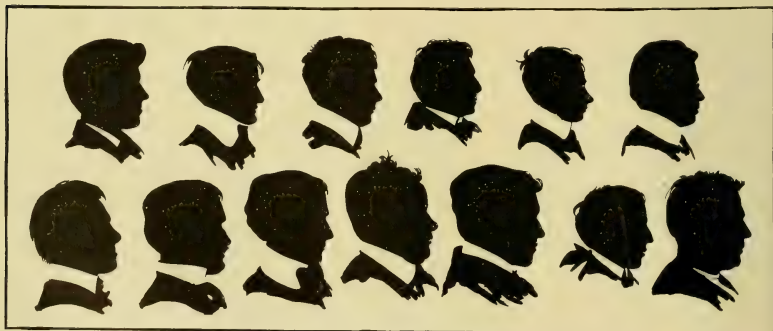
BY W. F. WILLIS

THE OLD MILL

giving precisely similar and simultaneous exposure, and both lenses must, of course, work at the same aperture, otherwise one negative will receive more exposure than the other. The camera must be kept level. One of the principal operations upon which the success of the picture depends is the trimming and mounting. For printing use a smooth-surfaced paper, as any roughness will be magnified by the lenses. Either solio or rex papers are good, and for most subjects a rather warm tone is to be desired. When the negative has been printed from, the print must be divided and transposed; that is, the left picture takes the place of the right and vice versa. Now, carefully trim to the same base line, and bear in mind the following rule: The sides of the prints which come together must each show a little more of the subject than the outer sides. An eighth of an inch is about right; a trifle more or less matters little. I need not go into the explanation of this, but will refer my readers to the *Photo-Miniature*, Vol. 1, No. 5, on "Stereoscopic Photography," which explains at length the reason for everything and how to do it. Each print should not be more than two and three-quarter inches wide.

A mount seven inches long must be used, as it fits the commercial stereoscope. The width may be anything up to four inches. The prints should be mounted with but the slightest distance between them. If they touch it makes little difference. In my own practice I prefer to cut and transpose the negative, thereby making the print on one piece of paper. This method has an advantage in that the trimming is done once for good. This process is, however, a delicate operation, and requires some practice to do nicely.

In conclusion, I would suggest to those who have never investigated this branch of photography that they closely examine some good stereoscopic views whenever the opportunity occurs. It will surely foster the desire to do such work, and if it is taken up and thoroughly gone into an interest will be opened up that was never known before. To my mind no monocular photograph can compare in interest with a good stereogram. There is a wonderful charm about the effect of a scene standing out in relief. I am never tired of looking at such views, and had I to choose any especial line of photographic work for my own pleasure, I should unhesitatingly select my stereoscopic camera.



THE "EXAMINER'S" ARTISTS

RADIOGRAPHY

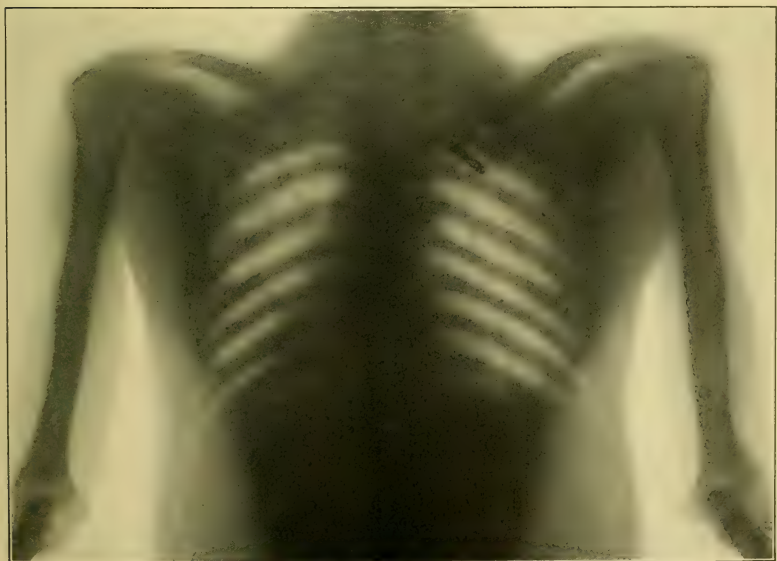
· BY · THEODORE · KYTKA ·

ILLUSTRATED BY MRS. E. FLEISCHMAN-ASCHHEIM

Undoubtedly the most brilliant achievement in photography during the latter part of the nineteenth century was that of Professor W. C. Roentgen in giving to the scientific world the result of his investigation with the X-ray and its effect upon the photographic plate. This latest phase in photography is now in use in nearly every branch of surgery. All of the leading hospitals are equipped with X-ray laboratories, and during both the Spanish-American and English-Boer wars experienced X-ray operators were attached to the hospital corps on the field of action, thereby facilitating the work of the surgeon beyond all other aids.

Although much has been written upon the subject there are but few people who know the real workings of this wonderful science, and it is for this class that I mean to describe briefly the process.

The apparatus necessary to produce radiographs, or photographs of objects invisible to the naked eye, comprises the following: A Ruhmkorff coil or static



SOLDIER WOUNDED AT MANILA, P. I. MAUSER 7mm. BULLET SHOWN IN RADIOGRAPH
PATIENT MADE QUICK RECOVERY



MAUSER BULLET IN THE HEAD OF A SOLDIER WOUNDED IN THE PHILIPPINES. PATIENT RECOVERED

machine, a Crooks tube, a fluoroscope, sensitized plates and the different paraphernalia for developing and printing, similar to that used in a photograph gallery. Good fluorescence in a tube can be obtained from the Ruhmkorff coil, which gives a spark of good size. The Ruhmkorff coil consists of two coils, the primary and secondary. The primary current passes through the primary coil, which is placed within the secondary coil, and induces the secondary current of high potential in the secondary coil. This latter current, after being interrupted with high frequency by mechanical means, is carried to the Crooks tube.

The static machine which is largely used in this country for the production of this new light is of the Wimshurst-Holtz type, the former being the generator or charger, the latter the induction apparatus, which consists of any number of circular glass plates, generally eight or ten, thirty inches in diameter, supported on an axle, with intervening oblong plates and combs. The entire apparatus is inclosed in a practically air-tight glass case. With this apparatus and with proper connections, a high mode of motion is developed in the current at high speed, which is very essential for the production of powerful rays.

The Crooks tube is a glass bulb of varying shape from which the air or gases have been extracted by powerful pumps, thus creating a vacuum and exhausting it so that only about one-millionth part of the air originally in the tube remains. At each end is fused a platinum wire, one end terminating in a flat disk or anode, the other on a cup-shaped electrode or the cathode.

When the two terminals of the tube are properly connected to the corresponding negative and positive poles of either the Ruhmkorff coil or the static machine a discharge takes place, which is shown by a greenish phosphorescence of the glass walls. It is from this point that the science of "X-Ray Photography" commences.

In taking a radiograph the sensitized plate is either wrapped in two or three light-proof envelopes, such as are made from orange-colored paper, or put into a plate-holder, the sensitized surface uppermost. The object to be radiographed is then placed over the sensitized plate, which is wrapped up in the paper envelope or in the plate-holder. The Crooks tube, being properly excited, is placed from eight to ten inches or more directly over the object, the Crooks tube being held firmly by clamps connected with a stand. The exposure varies from one-fifth of a second to twenty minutes or more, the length of time depending upon the subject, its thickness and density, and also upon the quality of rays generated and the sensitiveness of the photographic plate.

After the proper exposure has been given and the current shut off, the plate is taken into the darkroom and developed in the usual manner. For



NORMAL FOOT TAKEN THROUGH SHOE, SHOWING TENDONS, MUSCLES, AND HOW THE SHOE IS LACED



BELGIAN HARE

developer various formulæ are used — pyro, hydroquinone and metol, all give good results.

Certain structures in the body or foreign bodies are more or less permeable to the rays than the tissues in which they may be located. For instance, a bullet imbedded in a bone will impede the progress of the rays more than the bone, and this in turn more than the flesh which surrounds it. The bullet, being the most opaque of the three, will appear as the darkest shadow on the print, and should, of course, appear as clear glass on the negative after development. Thus, this art is the photographic representation of the shadows cast by the opaque bony structures or metallic foreign bodies,



CAT

according to their varied degree of opaqueness or density on the sensitized plate.

Especially prepared photographic plates, having the highest degree of sensitiveness and thickly coated, are being placed on the market by various manufacturers for this work. By means of these new plates the exposure is reduced considerably.

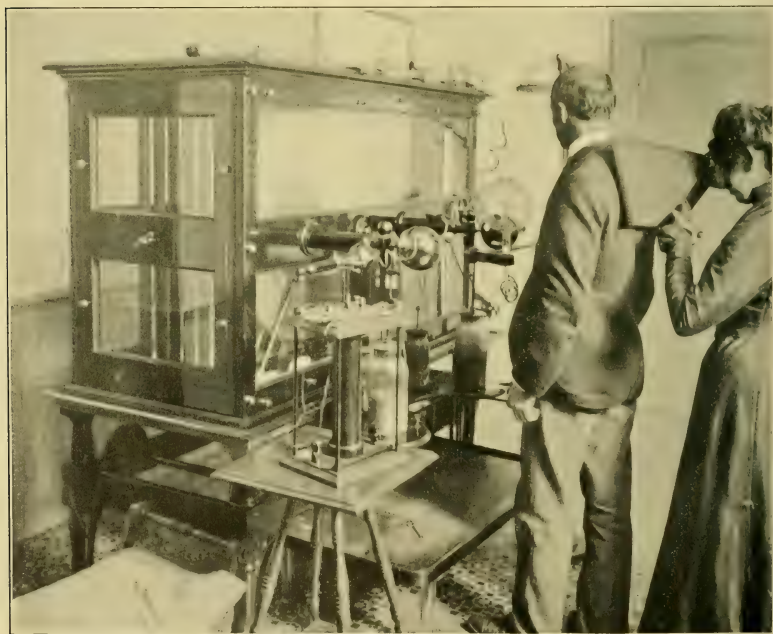
The Eastman Company recently placed on the market the so-called X-ray photographic paper. With this paper the negative work is dispensed with. For instance, the print may be made by placing one sheet in a light-tight envelope under the subject, exposed and developed, or a dozen sheets may be superimposed and exposed under the subject at one time with one exposure.

In Europe the celluloid films and sensitized ferrotype plates are used quite extensively.

Some radiographers are using double-sided films and plates to increase the sensitiveness and reduce the time of exposure, but this method, being difficult to manipulate and liable to increase failures, finds very few adherents. Recently Dr. Kahlbaum of Berlin attained great success in his radiographs by the use of a screen. His method consisted of placing the fluorescent screen in immediate contact with the sensitive film, with a clean sheet of paper between and the whole enveloped in an opaque paper envelope or a plate-holder, and exposed so that the rays had first to pass through the screen before reaching the sensitive surface.

Many beginners in radiography have spoiled or fogged numberless plates by storing unexposed plates in a wooden darkroom. This darkroom being too close to the X-ray apparatus and a wooden partition being no safe barrier to the penetration of the X-ray, fog was inevitable. The safest way of keeping unexposed plates is in zinc boxes with light-tight lids. It is also advisable to have the darkroom and printing-room as far as possible from the X-ray room.

Radiography is still in its infancy, having been given to the world by Professor William Conrad Roentgen of the University of Wurtzburg, on November 8, 1895. Yet, what a boon it has already been to suffering



EXAMINING A PATIENT WITH A FLUOROSCOPE

humanity. To give an adequate idea of the general application of the X-ray to latter-day science would require many pages.

The supreme courts in many countries have admitted radiographs in medico-legal cases as proper evidence. Radiography demonstrates with absolute certainty any chemical erasure on a document, particularly so when the erasure is made by the usual chlorine solution. The postal authorities use radiography for the detection of illicit enclosures.

A case is on record where a famous painting was radiographed to test its genuineness. The old painting was so darkened by age that it did not show any trace of a signature. The radiographic plate, however, brought out the different gradations of the chemical constituents of the various colors in the painting, and also the signature of Albrecht Durer, the celebrated artist. A case often quoted is that of a valuable mummy, about which professional opinion was divided. The mummy was radiographed without removing any of the bandages which completely enclosed it. When the plate was developed the mummy was seen to be the remains of the sacred ibis. A satisfactory factory experiment.

The geologists derive much valuable use of radiography in as to their opacity. process the lapidary genuineness of the gems, the genuine parent on the plate, less opaque. The plants and wood with the presence of larvæ

Its chief and highest the field of surgery, presence of foreign bones and malformations. By the injection of mercurial solution into a body after death the veins will appear perfectly opaque on the radiographic print.

Among the most prominent radiographers in the United States is Mrs. E. Fleischman-Aschheim of this city. Her laboratory is well equipped and complete in all its details. Colonel Forward, of the United States Department of Surgery in San Francisco, is an enthusiastic admirer of her work, and her achievements in this line have been highly commended by the medical authorities in Washington. Many of the wounded soldiers returned from the Philippines were successfully radiographed by her. The illustrations accompanying this article are all reproduced from radiographs by her.

The continued efforts of the scientists to improve upon existing methods and the great value of radiography to men of an experimental turn of mind will undoubtedly result in X-ray work being made far more simple within the next few years. However, the process is a simple one after all and it takes but a little care and study to turn out perfect radiographs.



MRS. E. FLEISCHMAN-ASCHHEIM

By the use of this demonstrates the diamond and other appearing as trans- the imitation more or botanist radiographs a view to detecting of destructive insects. use, however, is in where it shows the bodies, fractures of

PHOTOGRAPHING THROUGH SOLID LEAD: THE EXPERIMENTS OF BECQUEREL WITH RADIUM

BY EDWARD BOOTH, INSTRUCTOR IN CHEMISTRY, UNIVERSITY OF CALIFORNIA

Henri Becquerel, the eminent French physicist, tells in a recent number of the *Comptes Rendus* of the experiments he has made during the past year on the photographic power of the new element, radium. Radium is an element closely resembling barium in its ordinary chemical properties, but differing materially from it in some other respects, notably in its power of giving forth rays quite similar to the Roentgen rays, and having the same power of penetrating matters opaque to ordinary light and producing an effect on a sensitive plate.

Becquerel cut a groove, about as wide and deep as the thickness of an ordinary pin, in a block of lead a quarter of an inch thick. He filled this groove with a salt of radium, the amount necessary being, of course, very small. This block was then placed on a pile of photographic plates previously wrapped in black, light-proof paper and allowed to remain forty-eight hours. When developed it was found that three of the plates had been affected, the upper one most distinct, the second one a little less distinct, and the lower one in a hazy way. Not only was the shape of the lead block distinctly shown, but all around it, for a distance of approximately an inch, the plates were affected. If these effects were all due to the original radium salt, the rays from it must have passed through nearly an inch of solid lead.

As another experiment, the block of lead holding the radium salt was placed on a small sheet of lead of irregular shape and projecting beyond the limits of the block. On this sheet lead coins and other pieces of metal were placed, and all were distinctly outlined on the sensitive place by the rays from the same small amount of active material. In some cases the outlines of these smaller pieces of metal were more distinct than that of the original block of lead, indicating that the rays from the radium salt had set up a secondary activity in the pieces of metal and had imparted to them its power.

There has been considerable investigation of this phenomenon during the past two or three years, but as yet the cause has not been ascertained with any certainty, although a number of theories have been advanced. The action is remarkable in that the exciting cause of this activity seems to have nothing to do with light. This active substance continues to give off these rays indefinitely as far as known. Becquerel used the same material in his experiments for eleven months, and it was apparently as powerful at the end. There seems to be no need of revivifying the material by exposure to light. It has been kept in the dark for years and has still exhibited undiminished power.

The utility of the salts to practical photography is yet to be determined as the almost prohibitive price of radium prevents general experiment. However, it is certainly destined to be of enormous value and much will be written of its properties within the next several months. There is not the slightest doubt that the production of the new element will be cheapened and that before long photographers will be using it as they use flash powder today.



BY ARNOLD GENTHE

PORTRAIT OF FRITZI SCHEFF

THE CAMERA OF THE FUTURE

EDWARD W. NEWCOMB

Looking backward and calling to mind the heavy, clumsy apparatus I used to be only too glad to own and carry, the absolute inconvenience of the whole process of picture-taking and the number of discomforts—I found no fault with them—I can but wonder, as I fondly toy with my light, compact little camera, recently turned out as the very embodiment of every twentieth-century idea, what the camera of thirty years hence will be—what it will be fifty, a hundred years from now. For there is no reason to think that photography, young as it is and full of great opportunities for rich discovery, will remain at a standstill. It could not even if it would, for there are literally millions of photographers, and there are thousands of ambitious experimentors seeking fame and fortune in this field. And, indeed, there is room for them and many more, for wonderfully as the camera of today excels those of thirty years ago, there is great room for improvement in even the latest models. Even by selecting the lens of one maker, the shutter of another, the plate-holders of still another, and finally fitting them to the camera of our choice, a not inconsiderable improvement can at once be effected; and if the most important manufacturing concerns were not too proud to admit or recognize the merits of those features which they ought to know would be of great benefit to them and to us, we should be able to readily acquire a camera which might truly be called a composite of the chief features of all the best cameras in the land. Having effected that much, it would leave these people free to study out new ideas instead of wasting their time in trying to find how near they can imitate and appropriate a feature they envy in other instruments of perhaps inferior value.

When manufacture comes to somewhat of a standstill it will, instead of being a deplorable condition of things, be a favorable indication of new matter being introduced. Cameras do not wear out so rapidly as to require frequent purchase; on the contrary, they last years and years, so that at the rate they have been manufactured in the past the sale of any but radically new forms will be limited, indeed. It takes more than one or two years for a camera to become noticeably “old-fashioned,” and even when it does become a bit *passee* it is nevertheless capable of doing excellent work, so that, bar style or fashion, it is perhaps as good as the best. If our cameras would only wear out like a suit of clothes, or become absolutely shameful owing to changed styles, as our hats, then we might possibly defer any radical departure from conventional lines for some time.

This leads me to speculate on what the camera of the near future will be like, and as I seem to see before me the serious faces of thousands of inventors grappling with deep problems, I feel encouraged to believe that we are on the eve of a solution of some of the important problems of the present day. Color we are certain to have. The names of four or five established companies claiming to have mastered all the intricate details of photography in the colors of Nature pass through my mind, and even though we see little of color work yet, I am sanguine of their success in putting before us ere long something both practical and satisfying. Yet I call to mind the words of one of

my instructors many years ago, who said: "Until you can put *brains* on a plate, lad, you'll never produce color photographs."

Color we shall certainly have. As to animated photography, I doubt not but that it will become common to a certain extent and be within the reach of everyone, although I fancy it will not be in projected pictures that the great majority will find pleasure, but rather through improved mechanical devices for examining prints somewhat upon the lines of the now common slot machines. It is not often convenient to project pictures every time you wish to show them to friends. This same cause accounts for the fact that not one in a hundred of our amateur picture makers takes up lantern-slide work at the present day. Therefore, if animated photography is to obtain with us it must be through new methods of showing our results. I think these matters will, ere long, be thought out, and that one of the forms of the camera of the near future will be capable of taking and showing animated photographs in color.

Another feature of the coming camera will be the lens. In no other phase of the subject has more improvement been effected than in modern lenses, and still the opticians know that while the past has been fruitful and not unsatisfactory in its achievements, the greatest work is hardly more than begun, and they are bending all their energies to the production of something more nearly perfect. In speed and correction the lens of today is far better than of old, but the larger the aperture it can be worked at and the shorter the focus, the less favorably do some of the late models compare with their predecessors. Lens makers have gone as far as they can in shortening the focus—it is my opinion that they have even overstepped the bounds in this respect—and they must now take steps to afford us the good qualities of their old models combined with those of the new. That having been accomplished and a standstill arrived at, we may look for some of the further possibilities.

In the matter of provision for receiving the image, I feel quite sure that in twenty years we will be better provided than now, and will look back upon the methods now employed much the same as we do at the wet-plate process today. In one or two respects that cast-off process was almost incomparably superior to the processes of today, and it would be a great blessing if we could even have those choice qualities added to our present plates or films. After a great deal of patient endurance of the very faulty bromide of silver emulsion now used, someone will discover a vastly more sensitive material and we shall more nearly approach perfection in this respect.

Then we have our little-understood, ill-determined electricity, which undoubtedly will be applied in some way to the camera of the future. Why need we use a lens at all? Do we not see far more perfectly with our eyes than the faulty, exaggerating lens does? Plenty of instances have been recorded of a single flash of lightning leaving a good picture on a tree or house, and how do we know but that when we finally get this electricity harnessed we may be able to make great use of it in photography?

The camera of the future will, perhaps, be of a far different form than that of today. We have reduced the dimensions of our cameras to such an extent that the decrease of another inch in bulk or another ounce in weight



BY ARNOLD GENTHE

PORTRAIT

seems impossible, and with our various provisions for color, motion and things yet undreamed of, it hardly appears likely that the wonderful box of a half century hence will be as compact.

One fact seems more than possible, and that is that we may very likely discard lenses entirely. A very good and true image can be had now without this expensive and bulky adjunct, and as this image is really more true to Nature as we see it, less microscopic in its definition than that of a lens, why should it not be adopted after slight obstacles are overcome? We are doing much photography that the eye does not recognize as true at this very moment. We show a picture of a fast-propelled bicycle in which all the spokes are perfectly visible and can be readily counted, yet who ever saw a wheel whiz by and was able to do this with the eye?

The camera of the future will ever remain a light-tight box of greater or less dimensions, or else it will be no camera at all, but of what will it be capable? Judging from the improvements that have been made in the last thirty years it will be a treasure indeed, capable of expressing far more than ours of today, less mechanical, perhaps, more readily governed and not so arbitrary, possibly even responsive to the feelings of each individual, much as the brush is in the hands of the artist. If several artists paint the same scene it is likely to be handled in as many moods as there are artists, and while we recognize each picture as of the same scene, we realize that each has a different feeling, and it is this individual expression that characterizes one as better than another. Compared to the artist's product ours with camera and lens is, to say the least, inferior. So many pictures of the same spot by different people are as like as so many impressions from the same type. Let us hope that the eye of the camera of the future will have a less mathematically inclined vision and a little more poesy for those who want it, at least.

Another matter that may come about is the removal of certain limitations. We often see prettier things at twilight or by gas or lamplight than at any other time, but if they are animated we are denied the privilege of securing them, for the lens will not see nor the plate receive in less than hours, mayhap, what the eye sees in a second. Now, I do not think that this should be impossible or that it should be denied us when a painter can do it. I hold that whatever the eye can see the camera ought, somehow, to be made to secure for us, and I believe that it will one of these days. A fireplace, with grandfather seated before its bright blaze and several children romping about just before bedtime, is no uncommon picture, but, alas, it would be a wonder if that picture could be produced by photography with only the illumination afforded by the blazing logs! Yet I say that this or anything that is light enough to see ought not to be denied the photographer. A sensitive enough receptive surface ought to be at our disposal to secure the many gems that we cannot obtain.

In brief, the camera we are to have in 1930 will take whatever we ourselves can see, will lend itself to our moods and we will not be bound by such inflexible rules as we are now when using it. The few prophecies I have ventured are merely founded upon our present wants; they are not fancies or guesses. What else that I have not even dreamed of in wildest imagination I can only leave to the prophets and seers.

THE LENS OF THE FUTURE

A DESCRIPTION OF THE NEW LIQUID CELL FOR PHOTOGRAPHIC PURPOSES

BY EDWARD F. GRUN, M. R. C. S., L. R. C. P.

ON THE HEELS OF MR. NEWCOMB'S PREDICTIONS AS TO THE FUTURE OF PHOTOGRAPHIC APPARATUS COMES THE NEWS FROM ENGLAND THAT DR. E. F. GRUN HAS EVOLVED A LENS WORKING AT F-1.5 AND F-0.84, WITH WHICH IT IS POSSIBLE TO MAKE PHOTOGRAPHS BY THE LIGHT OF ONE INCANDESCENT LAMP IN ONE SECOND. THE SUCCESS OF DR. GRUN MARKS AN ADVANCE IN PHOTOGRAPHY HITHERTO UNOBTAINED AND OPENS UP POSSIBILITIES UNDREAMED OF BY EVEN THE MOST OPTIMISTIC WORKER. ALTHOUGH DR. GRUN ONLY ANNOUNCED THE RESULT OF HIS EXPERIMENTS ON APRIL 12TH, THE ATTENTION OF THE WHOLE OF PHOTOGRAPHIC EUROPE HAS BEEN DRAWN TO HIS WORK. THE NEW LENS IS BRIEFLY DESCRIBED IN THE LETTERS PATENT AS: "AN IMPROVED FLUID CELL LENS FOR PHOTOGRAPHIC PURPOSES." THE FOLLOWING ARTICLE ON THE OPTICAL CONSIDERATIONS OF THE NEW LENS IS FROM THE LAST ISSUE OF THE "BRITISH JOURNAL OF PHOTOGRAPHY."—EDITOR.

The principles involved in the formation of optical images are worthy of a short consideration. The source of all natural light is the sun. The rays of light proceeding from the sun must, on entering the terrestrial atmosphere, undergo refraction as coming from a rarer to a denser medium; this refraction appears sufficient to bring the rays to a diffused focus at or about the surface of the earth. This is capable of demonstration by aid of a card with a pin-hole in it. If a ray of sunshine coming through a window be intercepted with this card about six inches from the wall, where it would otherwise strike, it will be found that an image of the sun is formed on the wall, that is, it becomes visible, because it is not blurred by the diffusion of the adjacent images. If the card is removed some six or eight inches further from the wall, an image of the window becomes visible. This image is not formed by the pin-hole in the card, as is generally supposed. It is there all the time, but was not visible to the eye, any more than the stars are visible in the daytime. The interposition of the card, by cutting off the adjacent and superabundant light, has simply rendered the image of the window visible. All natural bodies act in regard to light in one of three ways. They either reflect, absorb, or transmit light. In the sun image formed on the wall of the darkened room, the image would be there whether the room were darkened or not, but it would not be visible to our eyes if the room were not darkened, as there would be a succession of images impinging on one another, these images giving rise to our impression known as light.

If, however, the light does not pass direct into the room, but first falls upon an object, such as a mirror, it may be reflected from that object, then an image of the sun is still obtained, or maybe the object absorbs a portion of the light and returns only certain rays, which may be either red, blue, or green; these rays pass through the aperture and still form an image of the sun, but of a different color. At the same time the shape of the image may be altered, by certain irregularities of its edge, as well as color, so the sun image is no longer round, but has an irregular shape, which we recognize as the image of a man, a house, or a tree. A number of these images more or less irregular in outline and varied in color, presented upon a plane surface, we describe as a picture, but they are nothing but altered sun images. If there be material of greater density than air fixed in our shutter aperture, the rays will be more

strongly refracted, and will form an image nearer to the aperture or, as is said, come to a focus sooner. If the transparent medium is bounded by convex surfaces a still greater shortening is effected. This shortening instrument is known as a lens. It is not essential that our shortening instrument should be of glass, but as nearly all other solid bodies do not transmit light, and as liquids must be contained within a solid receptacle, and as that receptacle must be transparent, it follows practically that glass must be used. If this be so, what is gained by using a substance other than glass? This is a question worthy of further consideration. In the first place, glass is not a fixed chemical compound, but is a mechanical mixture difficult to produce in exact proportions, every specimen varying more or less in composition; and even in solid block it is difficult to ensure homogeneity, hence the impossibility of making lenses of more than a limited thickness, or to guarantee the character of a lens when made.

These considerations led me to consider the possibility of constructing a lens of material other than glass. Dr. Blair many years ago had constructed a lens of hydrochloric acid, but this lens, owing to defects as to details of construction, was not a practical possibility, although the principle was correct. Subsequent to this the idea seems to have lain dormant, and it has remained to me to have the felicity of producing a lens which appears to be optically correct, and at the same time to be capable of standing the test of practical use. By making use of a fluid of the same refractive index as glass, not affected by temperature, without the liability of having currents set up within its confines, I have produced a lens of greater aperture than has hitherto been possible, a lens which has also much less obstruction to the passage of light, thereby giving greater illumination than a glass lens of the same relative aperture, and which I have now employed for three months without apparent deterioration. Such a lens requires more care than an ordinary lens, and can be renewed at much less cost than a high-class glass lens of similar aperture.

A lens of this aperture can always, if required, be reduced in aperture for daylight use, but with very rapid exposure the larger apertures can be used equally well for day as for night. With the aperture $f/1$ the light of one incandescent lamp immediately over the object will give a photographic impression in one second. By calculation I consider that strong daylight is equal to 1600 incandescent lamps, so that an impression should be obtained in $1/1600$ of a second by daylight. In conclusion, I beg to state that though the opinions expressed as to the formation of images may be somewhat original, they are based upon actual experiment, and are open to further discussion.

PANORAMIC PICTURES

To secure the best results an anastigmat lens should be used. The tripod top should be very carefully leveled. The position of the camera for each of the two or more exposures must be determined by marking the tripod top or by taking note of some prominent object in each section that comes just to the edge of the focusing screen or finder. The same exposure must be given each plate and all developed in the same tray that the several negatives may be uniform.



THE ROADWAY

THE CALIFORNIA CAMERA CLUB'S TRIP TO THE YOSEMITE

ILLUSTRATED BY HOWARD C. TIBBITTS

The California Camera Club will spend its annual outing this summer in the Yosemite Valley, the official time of the trip being two weeks, but all of the members who can will doubtless remain longer. There is, perhaps, no place in California more attractive to the photographer. It is of peculiar interest in that while many artists have painted its wonders and many photographers have carried their cameras along its trails, yet to the enterprising and to the adventurous views new to the camera and to the brush, wonderful views, worthy of all the effort that any one may put forth, are plentiful. The accompanying illustrations are examples of what a camera may do in the Valley. It is no wonder, therefore, that the members of the club look forward with eager anticipation to a thorough exploration of this wonderful gorge, which not only appeals to the artistic sense, but is as well an unsurpassed summer outing place amid the finest mountains, with the best summer climate of all the mountainous regions of the United States. The entire trip will cost \$55.

The Southern Pacific, which will carry the club on its journey to the Valley, has recently improved its service into that resort, and is now advertising it more thoroughly than ever before throughout the United States and in Europe. Many of the club's pictures have been used in its advertisements.



THE SENTINEL

THE GUARDIAN OF THE VALLEY STANDS SERENE AND IMPRESSIVE, THE EMBODIMENT OF GRANDEUR, BUFFETING THE GENTLE BREEZES FROM ITS RUGGED SIDES AND WITH ITS COMMANDING POSITION DEFYING THE EFFORTS OF SUN AND STORM TO CHANGE ITS FROWNING VISAGE.



UPPER YOSEMITE FALLS

A RIVER ROLLS OVER A PRECIPICE, SEETHES FURIOUSLY FOR A MOMENT AND THEN GURGLES ITS WAY THROUGH PINE AND FIR TO A PATHWAY BESTREWN WITH BOULDERS AND PROJECTING CRAGS.



EL CAPITAN

A ROCK, THE FAME OF WHICH HAS SPREAD WHEREVER THE LOVE OF NATURE IN ITS GRANDEUR IS PRESENT IN THE HUMAN HEART. KISSED BY CLOUDS AND ENTHRONED BY MIGHTY FORTRESSES, IT STANDS SERENE AND LAUGHS AT PUNY MAN.



THE OVERHANGING ROCK

FAR ABOVE THE VALLEY FLOOR PROJECTS A SINGLE FINGER FROM WHICH THE VALLEY'S HIGHEST WALLS APPEAR BUT TRACERY AGAINST THE SKY, A PANORAMA THAT QUICKENS THE STOUTEST HEART AND BRINGS TEARS TO THE EYES OF EVERY MAN.

PERCENTAGE SOLUTIONS

BY SAMUEL PURNELL

He who only occasionally develops a plate will probably be content with using a ready-made developer, notwithstanding the fact that he loses control over the development and is its slave instead of its master; but he who does much work and understands it, will desire to adapt the composition of the developer to the plate, the exposure, the temperature, and the quality of the negative desired.

For the use of the worker, be he amateur or professional, there is no way so convenient and accurate in compounding a developer as by the system of percentage solutions. It is a remarkable fact that few use or even understand this system. This condition, however, has resulted from the extremely technical and complicated manner in which writers have treated the subject, although it is really very simple, as I shall try to show. Laborious articles have been published as to preparation and use, much beyond the ability of the ordinary photographer to understand. From being one of the simplest processes it has been converted by them into one most recondite. Fine distinctions have been drawn between the avoirdupois and troy ounces, percentage by weight and by volume; so much has been said of standard weights, unit volumes, unit weights, arbitrary units, temperature, pressure, rational strength, percentage strength, and integral strength, as to bewilder any one but a trained chemist. For photographic purposes, all this hairsplitting is totally unnecessary; and more, it is harmful.

What, for example, is a ten per cent solution? Practically, it is one in which a fluid ounce (or 480 minims), such as water, contains one-tenth ounce, (or 48 grains) of a salt, such as carbonate of soda. For photographic use it is not necessary or desirable to consider any other point whatever. Use only apothecaries weights, regardless of how the salts may be sold by the dealer. In all cases consider minims and grains as synonymous and equal, whether liquid or solid; that is, 480 grains or 480 minims equal one ounce, fluid or dry. Then a ten per cent solution of any salt is one in which each ten minims contain one grain of the salt; and, conversely, one grain of salt is contained in each ten minims of liquid. Any differences that exist between this and absolute accuracy may be properly ignored.

To make a ten per cent solution is therefore a most simple matter. Suppose, for example, you desire to make up eight fluid ounces of a ten per cent solution of carbonate of soda. Find the number of grains (or minims) in eight ounces of water ($480 \times 8 = 3840$). One-tenth, or ten per cent, of this is 384. Weigh out 384 grains of the soda, place in a graduate and fill it up with water to the eight-ounce mark; dissolve the salt; and the result is a ten per cent solution. It is so with any other substance soluble to the same extent.

The use of percentage solutions in making up any developer is quickly and accurately accomplished. Suppose you now have all your materials in solution of ten per cent strength, the pyro or ortol being already preserved by half its weight of metabisulphite of potash, or other preservative. Take the following formula for an ortol developer: Ortol, 6 grains; sulphite of soda, crystals, 60 grains; carbonate of potash, 25 grains; ferrocyanide of potash,

crystals, 10 grains; water, 6 ounces. To convert this into a ten per cent solution formula it is only necessary to multiply each of these quantities by 10 to get the number of minims to use. The formula may then be alternately written as follows:

Substance	Weight Grains	Volume Minims
Ortol.....	6	60
Soda sulphite, crystals.....	60	600
Potash carbonate, dry.....	25	250
Potash ferrocyanide, crystals.....	10	100
Water.....	6 fluid ounces	

To the volume formula add enough water to make *up to* six ounces, and the developer is ready for use. In practice, to make up the above volume formula it is only necessary to measure out the number of minims of the ten per cent solution required of each of the above substances in a small graduate, transfer to a larger graduate, mix, then fill it up with water to the mark showing the quantity desired. If you desire to increase, or decrease, the number of grains of any substance in the developer, it is only necessary to increase by tens, or decrease by tens, the number of minims accordingly. Thus, 5 grains of ortol would mean 50 minims; 20 grains of carbonate of potash, 200 minims; and so on. This can all be done in less than a minute; far less time than it takes to tell it. For rapidity, convenience and accuracy there is nothing to compare with it. The solutions will keep in good order for several months, and can usually be used to the last minim.

Of course, there are sticklers for extreme accuracy who will tell you this is not correct, but it is correct enough for all photographic purposes. All its errors are relative and equal. Formulas are indicative, not imperative.

CELLULOID POSITIVES

BY GEORGE WHITE

I cannot understand why positive films on celluloid are not more generally made. Recently I talked with several of my amateur friends concerning them, and not one of the lot had ever seen one. When I started to use them I could not find them at the first three dealers I tried, but finally succeeded in procuring some. The film is simplicity in itself to work, being even more simple than velox prints, because there is no mounting required. The shadows are deep and full of detail; the high-lights are of that pearly whiteness so desirable in landscape and figure work.

Once you have given the film a fair trial you will print all your pet negatives in this manner, regardless of the slightly increased cost. A neat gold and white frame makes a most charming combination with the deep shadows of these positives. If your negatives are all marked, as mine are, with exposure time for velox papers, you have only to find the correct exposure time for one and then give any other negative a proportional exposure by the same light, according to its velox time.

Strips of velox paper, being cheaper, can be used to test the exposure for any new negative. I expose my positive films by placing them in the printing frame behind the negative, setting it up facing the door at the rear of my darkroom, and then open the door for from three to fifteen seconds.

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VOL. III

SAN FRANCISCO, CALIFORNIA, JUNE, 1901

No. 2

The popularity of the Postal Camera Club suggested by the editor of the Amateur Department is a source of gratification and pride. Let all amateurs assist in making the club a success.

EXCESSES' OF efforts to procure pictures possessed by no other were never
AMATEURS more clearly illustrated than in the case of Edgar Petch of
Rossland, B. C. He climbed out upon a projecting limb over-
hanging a chasm in the mountains so that a companion could photograph him
as he hung suspended. In trying to return his strength became exhausted
and he fell into the rocky chasm below.

This is but one instance of hundreds of foolhardy attempts to gain cheap
notoriety by procuring photographs at the risk of life and limb. Within the
past several weeks a Mexican photographer was gored to death by an enraged
bull, two southern photographers were lost in the mountains and a New Jersey
photographer had the wits scared out of him by an enraged lover who saw his
sweetheart's picture beside his own in the photographer's show window.

*The "Photo-Miniature" poster, a copy of which reached this office, is a gem, the
facets of which will illuminate the CAMERA CRAFT office until the little girl's red
jacket is dim and faded.*

REMARKABLE The assured success of Dr. Grun's new lens, particulars of
POSSIBILITIES which will be found in another portion of the magazine, will
more than double the field of photography. With a lens
making a picture in one minute's exposure by the light of
one incandescent bulb, it will be possible to do marvelous things. Says the
British Journal of Photography in commenting upon the new lens:

Such a lens as Dr. Grun's used in a panoramic camera might have given
us the late Irish disturbance in the House of Commons as an edifying picture
in the next morning's illustrated paper. Combined with a cinematograph
element it would be more effective still, and the result used to advantage — or

disadvantage — upon a screen in a political meeting. The possibility of being so embalmed on a film would also certainly react to great advantage upon speakers and actors. Church interiors, very beautiful as they have been portrayed, can now have the breath of life, hitherto rather painfully absent, put into them by the added congregation, choir and clergyman. Still better than in recording public functions, which, however interesting and important, cannot touch so closely as the immediate personal, the recording of home scenes around the fireside is brought within reach. There is no need to enlarge upon this point, for surely all who have watched children at work and play must often have been struck with regret at the impossibility of preserving a telling attitude or situation. It is now evidently possible and will soon become easily practicable.

A careful photographer estimates that over fifty thousand pictures were made of President McKinley during his stay in San Francisco.

THE NEXT SALON The success of the first San Francisco Photographic Salon was so remarkable and the interest excited in art circles so great that before its doors had closed it was practically determined to repeat the exhibition annually. Since the close of the exhibition and within the past several weeks CAMERA CRAFT has endeavored to find the sentiments of the leading photographers with reference to a repetition of the exhibition. The verdict was almost unanimous. "Hold one every year" seemed to be the universal sentiment.

With this end in view CAMERA CRAFT suggests that a meeting of the Executive Committee be held at an early date to confer upon the advisability of holding a second salon. No time should be lost in getting the preliminary work under way if it is determined to hold another salon. It will take weeks and months to properly advertise the salon abroad and in the East, and to do this properly time should be given the committees having the matter in charge to arrange their work.

Chicago is now hard at work on her next salon and already the members of the committees are beginning to perceive results.

The advertising man for the Eastman Company has coined a new phrase — "If you want it, take it with a Kodak" — and now we suppose that it will be repeated before sixty-five million people for three hundred and sixty-five days, until it becomes just as familiar as some of the other phrases coined by this genius.

THE BIG CONVENTION The Educational Convention of the Photographers' Association of America, which meets in Detroit in August, will be one of the most important meetings of photographers ever held in the United States. Subjects of vast importance to photographic interests will be discussed, and every photographer who can possibly do so should attend. California photographers especially should attend, as there will be a determined effort to bring the next convention to California. CAMERA CRAFT would like to have the name of every Californian who expects to go to Detroit.

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK
CONDUCTED BY H. D'ARCY POWER, M. D.

TANK DEVELOPMENT

I have, from time to time, referred to the advantages of tank development and given formulæ for the same. E. Kastner gives a metol formula in the *Photographische Rundschau*, which is as follows:

Stock solution A—	
Metol.....	1 part
Sodium sulphite.....	10 parts
Water.....	100 parts
Stock solution B—	
Sodium carbonate.....	10 parts
Water.....	100 parts

Take of each 50 c. c. (13 drachms), add water to a litre (39 ounces).

PHOSPHATE OF SILVER PAPER

For the past twelve months notices have appeared in the foreign journals relative to a new printing medium, said to offer many advantages. Like many other recent productions, silver phosphate is not absolutely new, but it has never been in general use, nor, until lately, was it an article of commerce. Of the various notices spoken of, the two most complete are the accounts in the *British Journal Photographic Almanac* and in the *Liesegang Jahrbuch*, both of this year. From the first we learn that to make the paper a drachm of silver nitrate dissolved in water is precipitated with an excess of solution of phosphate of soda, washed by decantation and allowed to settle until it occupies the bulk of an ounce. To this is added five drachms of tartaric acid dissolved in five drachms of water, rapidly stirring the mass with a rotary motion while the mixture is made. A jelly-like emulsion results, which can be rendered more fluid by warming or by shaking it in a bottle.

This jelly is brushed on to paper, wood or textiles, and after it is dry we have a sensitive surface. It is stated that if citric acid be substituted for tartaric a clear solution results that is even more sensitive to the light than the tartrate. So far as my experiments go, I am not able to confirm this statement. I found the silver phosphate difficult to dissolve in the citric acid, and the resulting paper not over sensitive.

Papers prepared by this brushing-on

method are naturally matt surface and not capable of giving the extremely fine detail of a gelatine emulsion paper. Experimenting with the paper as prepared above, I read the advertisement of the Phosphate of Silver Paper Company of New York, and wrote to them for a supply, which in due time arrived. Since then my work has consisted of an effort to test the value of their product. The paper is supplied in two textures, one coarse and the other fine, and both of quite unusual quality. So far as printing is concerned it is decidedly quicker and loses very much less in toning and fixing than solio or other gelatine papers. The statement that no loss occurs is, however, a mistake; a fair allowance must be made. The print may be toned in gold, platinum, or both, or fixed without toning. If toned, the results differ very little, indeed, from a similar treatment of plain salted paper, the toning being equally rapid.

The range of tint and tone is very wide. If fixed without toning in a weak hypo bath, to which a little carbonate of soda has been added, a very pleasant warm sepia tone results, the shade of which varies quite a little with the strength of the bath employed. It may also be modified by the action of heat in drying, which deepens the tone. For contrasty subjects in which the low tones predominate nothing could be finer, and, so far as pictorial effect is concerned, my personal preference would lead me to restrict its use to work of this class. The coarse paper is capable of giving very beautiful results, with bright high-lights and transparent shadows.

So far as gradation is concerned, nothing could be better, and the reproduction of detail is only limited by the grain of the paper. From what I have read and verified by experiment, we have in this paper all the good points of plain salted paper, which it closely resembles, but with this great advantage, that whereas plain salted paper must be home-made at the expense of dirty fingers, and used within two days, this paper does not deteriorate for months. The merits of plain salted paper for artistic effects is known to all serious workers, and with them it has

never dropped out of use. This phosphate silver paper can and will replace it.

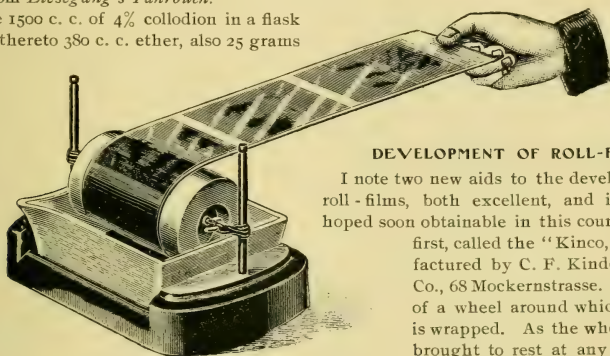
Apart from art work, there is another field in which it is likely to prove of the greatest utility, and that is in technical work, where good prints, rapidly made, are the first consideration. The fixation in hypo only requires five minutes and the washing is complete in twenty. For this work the fine-surfaced paper is excellently adapted, and I am using it exclusively in the making of medical photographs and charts for record and teaching purposes. Where extremely fine detail is required a collodion emulsion paper would give the best results, and Professor Valenta has published the formula for such a one, which I take pleasure in translating from *Liesegang's Jahrbuch*:

"Place 1500 c. c. of 4% collodion in a flask and add thereto 380 c. c. ether, also 25 grams

addition to our armamentarium in silver phosphate paper.

AN EXCELLENT TREATISE

"Landscape Photography" is the subject in the *Photo-Miniature*, of an essay by Mr. F. A. Waugh, and a notable addition to the literature of the subject. Taken as a whole it is sound and well written, full of excellent advice and original in its expression. Incidentally Mr. Waugh is not enthusiastic concerning isochromatic plates and makes merry over exposure meters. Fortunately we need not gauge his judgment by these remarks; for in this matter he is certainly not in accord with our advanced workers.



A SIMPLE DEVELOPING DEVICE

of solution of phosphoric acid of 1.265 sp. gr., and to this add 60 grams of citric acid dissolved in 100 c. c. of absolute alcohol. Next, dissolve 75 grams of silver nitrate in 80 c. c. of water, and add to the same 150 c. c. alcohol. Now, add the silver solution to the collodion in small portions at a time, strongly shaking the flask after each addition. This must be done in the darkroom. Next, neutralize the excess of nitric acid by the gradual addition of from 4 to 8 grams of finely powdered lithium carbonate, shaking as long as gas is set free. Then add 20 c. c. of a mixture of equal parts of glycerine and alcohol and filter through cotton."

This emulsion is readily coated and the resulting paper is of extraordinary sensitiveness, so that it is not safe to handle it in daylight. Otherwise its properties are like unto those of the matt paper I have already described. Taken all in all, I believe we have a valuable

DEVELOPMENT OF ROLL-FILMS

I note two new aids to the development of roll-films, both excellent, and it is to be hoped soon obtainable in this country. The first, called the "Kinco," is manufactured by C. F. Kindermann & Co., 68 Mockernstrasse. It consists of a wheel around which the film is wrapped. As the wheel can be brought to rest at any point the films can be developed separately, or by rotating the wheel *en bloc*. A red lamp stands inside the wheel and allows of immediate examination of the film. The lamp is removable, and the wheel can then be placed under the faucet where the falling water keeps it spinning.

The second type, called the "Wyndham," is made by G. Haughton & Son, 89 High Holborn, London, and is cheap (\$2) and simpler in construction. It consists of a drum, the axis of which is fixed to two uprights by means of thick rubber cords. When the drum is rotated these cords are twisted, and by their elasticity act as a spring rotating the drum in the opposite direction when the force is released. In this way the attached film can be drawn back and forth through the developing trough, or a portion of it maintained for a longer period therein.

A NEW BOOK

"Lantern Slides and Slide-Making" by Mr. Osborne I. Yellott, is a reprint in book

form of his articles on this subject in the *Photo-American*. As I repeatedly had occasion to favorably notice these articles during the course of their publication it only remains for me to congratulate intending slide-makers on their collection in a more handy form. The instructions are clear and concise, though ample, and the general get-up of the book a credit to all concerned.

MAKING A FOREGROUND

Speaking of landscape photography, there is an article by Horsley Hinton in the *English Amateur Photographer* of April 26th well worth the most careful study. He shows how most unpromising material can be made into most delightful pictures by what he calls "gardening" the foreground. That is, the rooting up, and may be, the temporary transplantation of herbage or wild flowers, so that desirable lines or masses result. The writer tells us that he has spent the whole day in effecting such a piece of gardening. However, the result, as shown by the beautiful prints with which his article is illustrated, proves that it was not a day wasted. Necessarily such methods are not for the photog-

raphers who find life too short to print in any slower medium than velox.

GRAINLESS NEGATIVES

Der Amateur Photograph describes a most novel method of obtaining grainless negatives, namely, to fully develop the plate in pyro without the addition of sodium sulphite, and then after fixing to place the negative in Farmer's solution until all of the silver image is dissolved out. When this is complete an image remains consisting solely of organic matter which was precipitated along with the silver. It is, in fact, a stain, and therefore grainless, and excellently adapted for enlargements.

Howard Farmer, editor of the English section of *Camera Obscura*, has placed exact photography under an obligation by the introduction of a new plate tester, whereby exact comparisons of speed, gradation, isochromatism and the relative value of different developers, as well as other matters of technical importance, may be readily determined. A full, illustrated description of this most valuable instrument is given in the April number of *The Photogram*.

THE PROFESSIONAL

CONDUCTED BY O. V. LANGE

PROTECT YOUR FINGERS

I notice that there has been going the rounds of the photo press, the different uses to which waste celluloid films can be put. There is one quite important item that has not been mentioned at all, and which I have been experimenting with recently and have found a great practical convenience to myself and those to whom it has been recommended.

Take five or six discarded 4 x 5 films, place them in a tray and pour hot water over them, or better still, immerse in a solution of caustic lye for an hour or two; wash, then dry, trim off, and cut them into very narrow strips and put in a wide-mouth bottle. An eight-ounce nitrate of silver bottle will do, then pour in a mixture of two ounces of alcohol and two ounces of ether. This will readily dissolve the celluloid. Now add an eighth of an ounce of castor oil; this is essential, as it prevents the film from cracking. After the mixture is dissolved each finger should be dipped into it and the hands swung rapidly around for two or three minutes so that the solution can set. The hands must be thoroughly dry before applying. This will protect them all

the time that they are in the solutions, either developing or toning; after it is no more required it may be dissolved off with a mixture of alcohol and ether, or sand soap and a nail brush, leaving the hands white and stainless. For those who are poisoned easily by photochemicals this is a capital substitute for rubber gloves, which are always cumbersome and decidedly unhandy.

DOUBLE GOLD TONING FOR ALL PRINTING-OUT PAPERS

A year or two ago I saw in *Wilson's Magazine* a toning formula recommended by Theo. Pentlarge, in which the chloro-platinite potassium used in the second toning bath was replaced by chloride of gold. I made a mental note of it at the time, but had no occasion to try the practicability of the suggestion until recently, when the last one of a dozen platinum tubes had been used up, and a batch of prints, consisting of ammonia, nitrate of silver sensitized cardboard, had to be finished without delay. I was for a time in somewhat of a dilemma, because some of the prints had already been delivered to the

University, and the rest had to be of the same general finish. This could not be done with a single toning solution, as it does not give clearness in the high-lights and transparency in the shadows, much less the deep, velvety black and colorless grays that distinguish the platinum tones. Fortunately I remembered the essential details of the double gold toning formula, and with some modifications, as they suggested themselves to me, I obtained a result that was eminently satisfactory.

Since then I have discarded the acid chloro-platinite of potassium and substituted alkaline gold chloride for the second toning. Not only has it been found good for plain paper, but for all of printing-out papers, both collodion and gelatine silver chloride emulsions.

The printing does not need to be quite so deep as for second platinum tone, but darker than for single toning, as it bleaches out considerably. I have found that a thorough preliminary washing four or five times is essential as all the free silver must be eliminated, if you wish the resulting prints to be clear and of good color.

The first bath can be somewhat weaker than what is usually used for single toning; its strength should be two grains of gold chloride to fifty ounces of water and thirty grains bicarbonate of soda; this bath tones forty or fifty 5 x 8 prints in from ten to twelve minutes, according to the temperature of the water, which should be nearly 65 degrees Fahrenheit. If the temperature of the water is lower the toning is much slower, and the prints can be taken out before they are entirely free from all of the warm purple tint. Another washing of two or three changes is necessary before they are placed in the last toning solution which is made up the same as the first, but it may be a trifle weaker in gold chloride.

The toning must be continued until all the purple has disappeared from the darkest shadows when viewing the print by transmitted light. The result will be prints of greater brilliancy than by toning in platinum, with better detail in the darkest shadows, and though these may be very black, still they have a warm tinge that is decidedly more agreeable than the cool greenish one of the chloro-platinite, especially for portraits.

The sodium hyposulphite fixing bath may be eighteen hydrometer test, temperature 60 degrees, and should be made slightly alkaline by adding a few drops of ammonia to prevent

sulphuration. Some printers leave them in this solution only ten minutes. In my opinion, based upon experience, fifteen and even twenty minutes is not too much, as the bleaching action, if any, is very slight. I might here state that one of the chief causes for fading of professional prints (and I have seen many such), is an old bath and too short fixing. This can readily be proved by studying the chemical action that takes place when a print is immersed in the fixing solution. Two salts are formed; the first salt, double hyposulphite of silver and sodium is almost insoluble in water, and soluble in hyposulphite of soda, therefore excess of hypo should always be used for fixing, and plenty of time to complete the elimination of this insoluble salt, which is readily acted upon by light and a damp atmosphere, to the ruination of the photograph.

To add a word of caution about washing may seem superfluous, still I know that some papers are more difficult to wash properly than others, especially those of the gelatine type such as solio and rex. These papers are heavy and will persist in sticking close together on the bottom of tray so that no water can properly circulate between them. They should therefore be handled individually for the first five or six changes of water.

A theory has been advanced for this double gold toning, that there is much more affinity between the already existing gold deposit and the gold contained in the fresh (second) solution than between the former and a platinum bath, a gold bath of necessity acting best when alkaline, while the platinum requires acidity to act. In the formulæ generally in use the alkaline gold bath, being followed by an acid platinum bath, neutralization evidently takes place. I do think that any professional trying this will find it cheaper, quicker and better than the former way of toning.

INTENSIFYING BROMIDES

A few days back I had a bromide print that was a trifle weak; it was too late to make another exposure, so I put the print on a glass plate and poured on it a half-strength saturated solution of mercuric chloride. When it commenced to bleach it was washed well, and then a weak solution of ammonia was poured over, and the result was just what was wanted. It had the property of warming up the general tone of the print, and as it was a portrait it was decidedly beneficial.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

METABISULPHITE VERSUS SULPHITE

A correspondent in Montana sends a formula and asks if he can substitute metabisulphite of potassium for the sulphite of soda, and how much should be employed. In the formula sent the eighty grains of sulphite of soda should be replaced by thirty-five grains of the metabisulphite, and the sodium carbonate should be increased from one hundred and twenty to one hundred and forty grains if it be anhydrous, and to one hundred and seventy if it be crystals. The proportion of bromide should remain unchanged. The metabisulphite is not directly a restrainer, but it neutralizes a portion of the alkali, and due allowance must be made for this action.

Emphatically, we do want a postal camera club. The second day after CAMERA CRAFT CLUB was issued the ayes began to come in. My remark on the necessity of all members being prompt in the discharge of their duty as to forwarding the album to the next member on the route list and in sending in their print for each monthly album seems to have sounded a key note. As one of the first applicants says: "Dereliction of duty by any member of the proposed club should be followed by summary removal of his name from the roll, and if so understood from the beginning, no hardship will be entailed." This was also mentioned by several later applicants. The suggestion was also made that a nominal sum be charged as initiation fee. This and a few other matters will be left to a vote of the members. A sheet will accompany the first album, on which all members can record their vote and offer any suggestions they may wish to make. It only lies with each one, whether they have previously sent name or not, who wishes to become a member to at once send in a print, with full detail as to subject, date, hour, condition of light, lens, stop, exposure, plate, developer, and any other information that may be of value. I would advise the sending of two prints, one to be marked R on the back, to indicate that it is to be held as a reserve print, in case the print for any future album does not reach me

on time. As the success, in fact, the very existence of the club, depends on each member doing his share, no leniency will be possible. Applicants should send prints at once, that I may start the first album promptly on July 1st. The first package will contain proposed rules to govern the club, that each member may vote on them. It is clear that we cannot occupy too much room in this department, because only a fraction of CAMERA CRAFT'S readers are concerned, therefore business relating to the Postal Camera Club will be carried on mainly by correspondence in the future.

A correspondent wants a good developer for bromide paper. He uses pyro negatives, and as he is only an occasional worker, adds his dry pyro to the solution as required. He wants something that will be equally as handy for an occasional enlargement. Here is what I have used for the last two or three years. Only one stock solution is required. It keeps indefinitely:

Sulphite of soda.....	2 ounces
Citric acid.....	40 grains
Potassium bromide.....	30 grains
Water.....	40 ounces

If it is to be kept for long periods of time it might be advisable to use distilled water or to boil and filter the common tap water. To each ounce of the solution add six grains of dry amidol and one ounce of water just before using. A fine black is obtained, and development of a correctly exposed enlargement requires about ten minutes.

A reader in Sacramento wants some kind of an exposure meter that will give him the correct exposure for interiors. One is about as good as another. I own four of these valuable adjuncts to a photographer's outfit, and if I knew where to find one of them I might use it occasionally if I had more time. This question of exposure for an interior is easily handled. Open your lens out to full opening, cover your head and the focusing screen well with a generous focusing cloth, and as soon as your eyes

become accustomed to this semi-darkness, decrease the size of the stop until you can just see on the ground-glass all that you require in the picture. Ten minutes on a rapid plate will be the right exposure with that stop. If you find the stop is f-22 and you wish to use f-64 use it, but give eight times or eighty minutes because the square of 64 is eight times the square of 22. The correct exposure with a certain stop is to the correct exposure for another stop as the squares of their f values are to each other. If your lens stops are marked with U. S. numbers instead of f values you have only to employ these numbers as you would the squares in the first case—f-22 is U. S. 32, and f-64 is U. S. 256, requiring eight times the exposure.

A New Mexican subscriber writes to ask how he can secure the best results photographically in the high altitudes, the Grand Canyon and other high altitudes. He contemplates a trip to these places, and fears failure through an exaggerated fear of the difficulties. He has read that failures were the rule instead of the exception. I am sorry I can give no cut-and-dried rule for securing good results. It is a question of knowledge and judgment. Elaborate tables have been compiled showing the decrease in exposure required as higher altitudes are reached, but they are theoretical. The best way to cope with the exposure question, is to carry a few tubes of developer and make an occasional duplicate exposure for a trial development the same evening. This trial plate need only be placed in the normal solution and rocked in ordinary darkness for the length of time that a correctly exposed plate is known to require in that developer. The light is then turned up, and one can easily tell by its appearance whether it was over or under exposed. The plate can then be thrown away. The whole secret lies in knowing how to use the orthochromatic plate and the color screen. The magnificent studies that you have seen by Oliver Lippincot were made in that way. Good work has also been done on plain plates without a screen, but the clouds were not as pronounced.

A plain plate gives better distance, or rather, the impression of distance, because it is strongly sensitive to the blue haze that sometimes enshrouds distant objects. An isochromatic plate is more sensitive to the yellows, and, in a less degree, more so to the

reds than the plain plates. That is why it will work quicker than the plain plate of same rapidity, when used behind a screen, in a yellow sunset, or on a flashlight exposure. The yellow screen prevents the too strong action of the blues. It will hold back the blue sky, making it thin in your negative while allowing the white clouds to act fully, and give density. It will, for the same reason, hold back the blue or purplish haze in the distance, making objects seem closer because the atmospheric effect is destroyed. This is sometimes an advantage, but not always. You will see where judgment must be used instead of rules. If a distant range of mountains is but slightly dark against a blue sky, the use of a color screen would make it almost the same shade as the mountains, whose outline would be lost. If you wish to photograph El Capitan, for instance, when it looks nearly white in the strong sunlight, use a color screen and it will come out light against a darker sky. Again, if the view is mostly greens and blues the color screen will take nearly twice the exposure necessary.

I would advise the making of a few experiments before leaving home, with the object of confirming these notes. The results will teach you more than pages written by another. You can no doubt find conditions similar to some that I have cited with the exception of the high altitude.

A subscriber asks my opinion concerning the accuracy of a table which he copies from the photographic column of a Philadelphia daily: "Pyro, time for image to appear, sixteen seconds; development finished, one and three-quarter minutes; metol, appearance, five seconds; finished, two minutes," etc. This is one of these half-truths that are so misleading to the amateur. The table was no doubt altered from Mr. Watkins table of factors which, as he explains, are only given as a rough guide. His theory is, and it works very satisfactory in practice, that with each developing agent there is a certain factor that, no matter what the other ingredients of the developer or the time of exposure of the plate may be, if the time which elapses between the first pouring in of the developer and the first appearance of the image, be multiplied by this factor the result will be the total time required for complete development of the plate. His table was published only as a means of comparison.

It is evident that a formula for metol developer containing twice the alkali that another formula calls for will bring out the image much quicker but the factor will remain the same, so that the table my correspondent sends is of little value. One has to even determine the factor most suited to his own requirements. It may be higher or lower than that required by another worker who desires harder or softer negatives. With a few trials you can easily determine the factor for your own developer. It is plain that the table sent is of no value except as it suggests a possible approximately correct factor by dividing the total time by the time of first appearance; but even a slight variation in the temperature will make the time of first appearance vary while the factor, which this table ignores, would remain the same.

A correspondent wishes to ASCERTAIN find out whether the CONTENTS OF contents of an unlabeled bottle UNLABELED be sulphite of soda, carbonate BOTTLES of soda, or carbonate of potash. If he will add a little hydrochloric acid to a solution of the salt it will effervesce a trifle, and, if sulphite of soda, give off a suffocating odor, or rather, sulphuric acid gas. A little of the salt left exposed to the air for a few hours will soon determine which of the other two chemicals it is, should it not be sulphite. If it is carbonate of soda the crystals will get more or less white and dry. If carbonate of potash, they will become more or less damp and liquid, according to the moisture in the air.

In looking over a collection PHOTOGRAPH- of architectural views coming HIGH prising the public and historical BUILDINGS buildings of Boston and vicinity, while at a friend's house the other evening, I was impressed with the uniform good quality of the work. I tried for some time to discover why they were so much better than any similar series that I had ever seen. It finally struck me that it was the lighting. The photographer, and I found that he was but an amateur of two or three years' experience, had invariably chosen his moment for exposure when the sun was shining with nearly full force upon that side of the building shown in the picture, yet not quite far enough around to leave the front entirely in shade. This scheme of lighting makes every projecting window cornice, or ornament, on the

front of the building stand out with a relief that only long shadows can give. His pictures had none of that flatness that one gets by working on an overcast day or with the sun illuminating both the side and the front equally; neither was there any of that unpleasant hardness due to working with one wall in strong light and the other in entire shadow, as we are told to do by the books.

A correspondent has been PERMAN- using the permanganate of GANATE OF potash reducer, and finds fault POTASH AS A with the uncertainty of its results; at one time it seems to REDUCER attack the high-lights only, while at another it reduces evenly the whole image. He has, like so many others, neglected to do his experimenting in a systematic manner, viz., changed but one condition at a time. This would have allowed him to have made deductions from his results that would have explained their seeming uncertainty. He would have found that its action varies according to degree of dilution, and accordingly as the negative be wet or dry. A dilute solution applied to a wet negative will reduce it evenly all over, while a strong solution used quickly on a dry negative, followed by instant washing, will confine its action solely to the high-lights. By repeating this method, washing and drying the negative between each flowing of the solution, any amount of density in the high lights may be reduced without the detail in shadows suffering in the least.

A friend settled this question LONG OR SHORT tion for himself in rather FOCUS LENS a novel manner, and I think it was about as sensible as it was original. He had tangled himself up pretty thoroughly by reading an assorted lot of advice on the subject of the most desirable angle of view for correct perspective, and was about as undecided as he could well be until he happened to remember having seen Professor Latimer with his class, just east of the narrow-gauge mole, sketching the farmhouse that stands there. He took his camera to the spot and found that it required a 12-inch lens to make the subject, included in the sketch as made by the class, fill his 5x7 plate. That settled it. He is using a 12-inch focus lens on his 5x7 plate, and all the arguments for or against lenses of a certain focus do not interest him in the least.

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS
CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

The long-wished-for season has arrived. The trees and shrubbery along the Desplanes River, up Salt Creek, the Calumet River and the other haunts of the amateur photographer are in condition for springtime studies, and Chicago amateurs are more than busy.

The annual outing, the red-letter event of the season, to Pottawattomie Park on the thirtieth of May, is a thirty-mile trip and a day full of photographic possibilities. The trip is the culmination of carefully-laid plans and is always liberally patronized by not only the followers of the camera, but by numerous friends as well, who are always sure of quick returns and a bushel of fun.

The lecture by the Rev. S. M. Johnson, on the evening of the eighteenth of April, was an overflow meeting. Mr. Johnson's subject was "The Cliff Dwellings—Strange Ruins in Southwestern Colorado." Eighty-five views, handsomely colored, were used by the lecturer, and Mr. Johnson, with fourteen years of special study and an intimate acquaintance with the historical and scientific sides of the subject, gave a very instructive and picturesque entertainment. Many of the views were by Jackson, the celebrated Rocky Mountain photographer, who accompanied Mr. Johnson on his trip through this interesting section.

On May 15th an entertainment in Fullerton Hall and the clubrooms of the society was largely attended. Vocal and instrumental music, a set of interesting slides from the American Lantern Slide Interchange, an informal hop and refreshments rounded out one of the most enjoyable evenings of the year. "May they occur often," was the outspoken wish of many of our friends and members.

A members' exhibit is the next feature on the list and responses have been generous. The exhibits by eastern and western photographers have infused new enthusiasm in our members, and they now desire to show their own works as comparison. This exhibit will be a full representation of the work for the past year.

The following notice has been sent out by the Committee on Publicity and Promotion for the second Chicago salon:

The Chicago Society of Amateur Photographers has decided to hold its second salon in the galleries of the Chicago Art Institute from October 1 to October 22, 1901. The purpose of this salon is to bring together the best examples of the photographic work of the year, rigidly to be selected by a competent jury of photographers and artists. Particulars may be had shortly by addressing the Executive Committee, Chicago Photographic Salon, the Art Institute, Chicago, Ill.

DR. PARKER'S EXHIBITION

BY W. B. DYER

Just before the collection of work by Dr. Parker was recently hung on the walls of the Chicago Society, it was my pleasure to enjoy a leisurely view of the prints, which greatly interested me. This was the first of the one-man shows by our home talent, and as such possessed a special interest. The collection was not a large one, but was given considerable attention. Dr. Parker has chosen the difficult medium of manipulated platinum for the production of his pictures, and, in so doing, has shown a seriousness of purpose that commands attention.

In two portrait studies there are unmistakable promises of accomplishment in this platinum treatment. An important feature of this collection is the attention Dr. Parker has given to the mounting and framing of his prints. He is giving this subject thought, and the results are highly gratifying. It would seem, however, that his efforts along these lines have been somewhat misdirected, in that some of the frames, although well thought out, show too much effort and are too obtrusive in themselves, instead of being subordinated in importance. Then, too, in the mounting the marginal trimmings do not serve their best purpose, being too ornate and distracting, instead of assisting in carrying out a tone scheme, either of harmony or of decoration. The presence of these faults, however, promises much that Dr. Parker will certainly accomplish along this line, for it is out of just such earnest efforts that the best results finally emanate. His work is serious, and I, for one, congratulate him.

THE PHOTO-MICROGRAPHER

CONDUCTED BY
THEODORE KITKA

A DOZEN COMMON FAULTS IN PHOTO-MICROGRAPHS

I—Definition good on one side of the picture and poor on the other.

Cause—This may arise from the specimen not being mounted flat. Draw-tube may be out of centrality. The camera back which holds the slide may be out of square with the microscopic stage or the front of the camera.

II—Negative very thin.

Cause—Under-exposure or under-development.

III—General poorness of definition, with lack of detail in diatomes.

Cause—The cover-glass adjustment may not be correct for the thickness of the cover-glass. If there is no cover-glass corrector to the lens draw out or push in the draw-tube until correctness is assured.

IV—Negative with high-lights choked and black.

Cause—Developed too far.

V—The image appearing foggy on the ground glass.

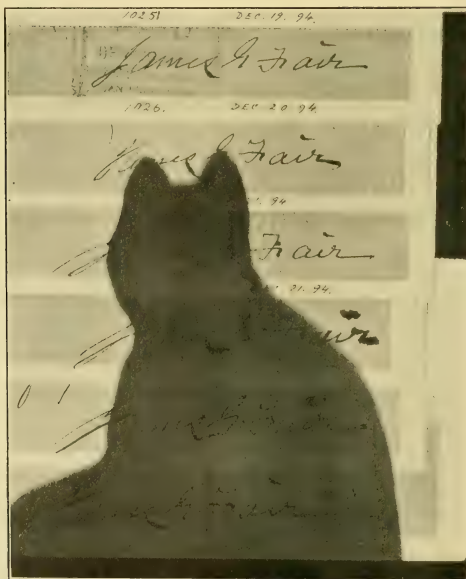
Cause—Focus sharper and see if eye-piece is not steaming from condensed moisture on the front or back lens.

VI—A flat and dull appearance over the whole picture.

Cause—May arise from over-exposure with under-development; not enough restrainer; plate may have been fogged. See if camera is light-tight; also see if darkroom lantern is safe, particularly for isochromatic plates.

VII—Negative having a shaded effect on one side and none on the other.

Cause—Chiefly due to light being unevenly spread over the surface in high-power work; the auxiliary condenser is not central,



MY CAT NEGATIVE

or the sub-stage condenser not properly centered.

VIII—General definition lacking in negative.

Cause—Bad focusing; poor objective; camera disturbed during exposure.

IX—Want of contrast, general flatness, in high-power negatives.

Cause—Under-exposure, or under-development, or both; wrong screen employed or plate improperly sensitized; improper illumination.

X—White-line effect upon hairs or around bacteria.

Cause—Diaphragm closed too much; the plate not properly backed.

XI—Roundness of field.

Cause—Apochromatic objective at fault. Lengthen the camera if possible; use a lower eye-piece.

XII—Absence of blackness in shadows.

Cause—Badly corrected objective; too much light. Try contracting the cone a trifle by closing the iris.

The few faults mentioned are but the common troubles and defects found in negatives. At times it is very difficult to locate the real

cause of a glaring defect, and again, it is very simple. Some time ago I had to enlarge several hundred signatures on the same scale. The negatives were made with an enlarging camera, the bellows being drawn out about twelve feet and firmly set. The plates used for the work were 20 x 24 inches in size. The work consumed several weeks. My assistant was in the habit of removing every night the lens, with the front board, and placing it in the safe.

One morning I began to expose and develop my negatives as usual, and in the first that I developed I noticed that, although the signatures were sharp, a peculiar shadow had been cast on the negative. I was at a loss to explain the presence of the shadow until an examination of the camera divulged, to my great astonishment, the fact that our pet cat had used my enlarging camera to accommodate herself in enlarging her family. In the middle of the bellows I found the old cat and five miniatures comfortably located. The accompanying photograph shows that during the exposure of the negative the cat's curiosity was aroused by the removal of the cap from the lens, allowing the light to enter and cast a silhouette on the plate.

NEWS OF CLUBDOM

LOS ANGELES CAMERA CLUB

The annual election of officers which took place at the meeting of the Los Angeles Camera Club, held May 10th, resulted as follows: President, A. C. Moore; vice-president, W. D. Campbell; treasurer, Mrs. P. E. Woten; recording secretary, Mrs. H. H. Douglas; corresponding secretary, Helen L. Davie; directors—Mrs. A. S. C. Forbes, Mrs. L. W. Harmon, G. G. Johnson, O. Granicher, W. F. Morphy and C. O. Valentine.

Much interest was taken in the last print contest. All previous contests had been in landscape, and this, being in the genre class, proved a pleasant change. "A Twice Told Tale," by Miss Helen L. Davie, was awarded the first prize, while "The Cobbler," by Miss Kate Collins, secured the second prize.

S. A. Hutton, A. C. Moore, Fred Knopf and H. R. Patty received honorable mention.

The Saturday afternoon teas have become a regular feature and the men are evincing quite as much interest in these gatherings as the women. It is rumored that a member of

the sterner sex will preside at one of these functions in the near future, and the girls are looking forward to it with great glee.

The Camera Club tally-ho, a feature of La Fiesta parade, was trimmed in the club colors, old rose and olive, the flowers used being pink geraniums and carnations. The harness of the eight horses was covered entirely with pink and green, while the eighteen ladies who rode were gowned in white with poke bonnets of white, lined with pink. The trimming of the bonnets consisted of pink carnations, and a huge bunch of the flowers was tucked into each of the Marie Antoinette fichus. Elbow sleeves with long pink mitts and green bags, holding the pink and green confetti, completed the costumes at once effective and dainty. The nine outriders wore white cavalliero costumes with pink and green trimmings. Each one of the ladies carried an imitation camera, and after each snapshot the finished pictures, excellent half-tone portraits of President McKinley, were scattered through the crowd.



BUSINESS NOTES



The *Photo-Miniature* has recently moved to new quarters at 287 Fourth Avenue, New York, where larger and more suitable offices gratify a long-cherished desire.

An exhibition by two well-known eastern amateurs, Mr. J. Geblin of New York City, portrait work, and Mr. W. H. Croker of Montclair, N. J., landscapes, recently excited considerable interest in New York. The exhibition was held in the quarters of the Dickinson Company, 83 Nassau Street, and was very successful.

Pictures entitled "Portrait of Self" often appear at the salons and exhibitions, and to many it is a mystery how the photographer is enabled to do all of the work himself. This is a mystery no longer, as it is fully explained by a little book issued by the Faries Manufacturing Company, Decatur, Ill., descriptive of the "Autopoze." The booklet is free.

The Southern Pacific Company has recently issued a beautiful booklet, entitled

"Yosemite." The book contains about two dozen reproductions of splendid photographs printed in colors, making it one of the most handsome publications yet issued by the company. Copies can be had by sending ten cents in stamps to the Information Bureau of the Southern Pacific Company, 613 Market Street, San Francisco.

The *Actien-Gesellschaft fur Anilin-Fabrikation* announce that, pursuant to general request, they have placed a smaller package of the Agfa-Intensifier on the market. The package contains two ounces and retails for thirty-five cents.

The new illustrated sheets, containing descriptions of photo-button novelties, published by the Miniature Portrait Co. of San Francisco, is particularly interesting at this season of the year. A copy will be forwarded upon application.

Mr. L. D. Hicks has returned from a business trip to the north.

Are You Going to the Country?

If so, you need films and plates, or may be you need a camera. Our line is the most complete in the city. ☘ ☘ ☘

Goldsmith Brothers
Developing and Printing
236 Sutter Street S. F., Cal.

WANTS

Free to those seeking employment.
Three lines, one insertion, 50c. Three insertions \$1.00.

A good retoucher desires a position in gallery. City or country. Samples submitted. References. Address Miss E. B., 1259 Hayes Street.

For Sale—A fine collection of Columbia River and Washington Indian film negatives, $3\frac{1}{2} \times 3\frac{1}{4}$. Fine printing and enlarging qualities. Ten unmounted prints, one from each, mailed on receipt of \$1.00. Address C. G. Rideout, Seattle, Wash.

Exchange—I will send you a 4x5 print of good views in and around New York City for every print sent me. Chas. H. Snively, 357 56th St., Brooklyn, N. Y.

A rare chance for the right man. Oakland gallery, newly furnished and in excellent shape. Cause of sale, ill health. Terms moderate. Address, Oakland, CAMERA CRAFT Office.

At—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

For Sale—A floating gallery on the Columbia River with entire outfit for portrait and view work. Have been working river towns between Portland and Astoria, Or. Price reasonable. Call on or address Wm. B. Rush, Clatskanie, Or.

For Sale—A newly furnished photographic gallery in San Francisco. Cause of selling, parties desiring to leave the city. Can be purchased at a very low price. Address, C. P., CAMERA CRAFT office.

\$350 Cash—Will buy a modern, well-furnished Studio in the Mission, San Francisco; \$650 worth of apparatus and furniture in sight. For particulars address L. D. Hicks, 220 Sutter Street.

A GOOD EXCHANGE MEDIUM
FOR AMATEURS



BY CLARENCE H. WHITE

PORTRAIT OF GIRL

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. III.

SAN FRANCISCO, CALIFORNIA, JULY, 1901

No. 3



BY E. M. BAUGHER



BY 
EMA SPENCER

THE ATTENTION OF PHOTOGRAPHERS THE WORLD OVER HAS RECENTLY BEEN ATTRACTED TO THE WORK OF THE NEWARK (OHIO) CAMERA CLUB, AN ORGANIZATION HEADED BY MR. CLARENCE H. WHITE. THE MANNER IN WHICH THE MEMBERS OF THIS ORGANIZATION DISREGARDED ALL OF THE CANONS OF WHAT IS KNOWN AS "LEGITIMATE" PHOTOGRAPHY IN THE PRODUCTION OF THEIR PRINTS AND THE REVOLUTIONARY CHARACTER OF THEIR WORK HAS OCCASIONED MUCH CRITICISM—CRITICISM WHICH HAS SO FAR REMAINED UNANSWERED.—ED.

The little coterie of amateur photographers in and near Newark, Ohio, who have been inspired to an active interest in the pictorial possibilities of photography by Mr. Clarence H. White, and who have been influenced to earnestness and urged to seriousness and steadfastness of purpose by the same strong and wholesome personality, have become known in photographic circles here and abroad as the "White School." This title may be used quite fitly in its primary sense, for this small club of earnest and ardent workers, in simplicity of conduct, sincerity of aim and deference to its leader, finds a prototype in the old Greek schools of philosophy. For verily, "the true philosopher and the true poet are one, and a beauty, which is truth, and a truth, which is beauty, is the aim of both."

That the Newark Camera Club has acquired considerable reputation through local, national and foreign exhibitions, is only an evidence that sincere work, in whatever field, must always have a quality that commands respect. The leader of what has been called the "Western Art Movement," is not a censor nor an autocrat, but a "guide, philosopher and friend," full of the liberality that belongs to a broad nature and of the self-poise that comes from assured strength; a man with a practical and profound belief in the truths he advocates, and with a large fund of helpfulness and suggestiveness always at the service of those who have been stimulated by his sustained enthusiasm, or, in fact, of any who ask it.

This "school" has been evolved by perfectly natural and simple processes. Far from being established with any deliberate intent, it has been merely the natural outcome of the influence of a strong nature over those of

similar tastes and lesser abilities. Perhaps its real beginning was in the early spring of 1898, when the Newark Camera Club was formally organized, and Mr. White at once found his place as leading spirit of the order. Those who personally know his thoroughness, straightforwardness and ingrained hatred of insincerity, will not be surprised that under such a leadership, superficial work was impossible, and shallow conceptions of the art of photography were intolerable.

One of the vital principles in the creed of the "White School" is that "art *can* be brought into photography"; that it is possible to render an idealized treatment of a subject, even with so mechanical an agency as the lens.

It is surprising how little talk there is in this club of formulæ, lenses and shutters, of mechanical processes and media. The art spirit is so predominant that the meetings those of a body of those of a camera is already a moving it into an art would have the cluding in the club eral painters of

Each member value of the asso-comparison of re-inspiration to tion to better work ance of a high ard. The satisfac-growth and the dered by the pro-thing approaching garded as the es-compared with tion, however all only a mere



BY EMA SPENCER

CURIOSITY

resemble more art students than club. In fact there ment toward merg-club, a step that advantage of in-membership sev-exceptional talent. feels that the real ciation is not in a cipes but in the study, the stimula-and the mainten-and higher stand-tion in a sense of pleasure engen-duction of some-an ideal are re-sential things, which apprecia-gratifying, is after detail.

most characteristic

Probably the attribute of the Newark Camera Club is its earnest desire to do *right* things, to work in right directions—directions approved by men whose opinions should carry most weight. Photographers who hope to make the best of their art cannot afford to ignore the advice and criticism of painters. If the camera can be made to produce the effects of tone, line and composition, why may not these qualities make excellence in a photograph as well as in a painting? It may be difficult to detach one's self from the iron embrace of a mechanical process, but it is the only way to attain individuality. Character is never expressed in chirography until some of the rules of the Spencerian system are broken.

While the influence of Mr. White is very perceptible, there is no intentional imitation, the work of each member being independent and the individuality of each respected and fostered. Mutual help in the way of suggestion

and criticism is freely interchanged and the informal talks are often the means of crystalizing vague ideas into definite form.

Every year since its organization the club has held a public exhibition of prints representative of its work for the year. These exhibitions have had the inestimable advantage of being enriched by generous contributions of pictures from the most prominent American photographers, thus enabling the Ohio contingent to keep in touch with the progress of the Eastern workers. The exhibits have been carefully and artistically hung and much pains taken with the catalogues, the last one having a signed photogravure frontispiece of Mr. White's "Edge of the Woods — Evening." The last exhibition was held November 28 to December 1, 1900, and all pictures submitted by Ohio workers were rigidly examined by a thoroughly competent jury consisting of one photographer and two painters of considerable note. By special invitation one hundred and fifty-five pictures were obtained from Miss Ben-Yusuf, Miss Rose Clark, Mrs. Kasebier, Miss Eva L. Watson, F. Holland Day, Robert Demachy, William B. Dyer, Frank Eugene, Joseph T. Keiley, Robert S. Redfield, J. G. Bullock, Eduard J. Steichen, Alfred Stieglitz and Edmund Stirling. The result was an exceedingly fine exhibit comprising examples of the very best photographic work that has yet been achieved.

The local interest in these exhibitions has been marked and widespread. A theory has been suggested that photography may open the way for a general art movement. While hesitating to attribute the condition, even remotely, to photography, yet it may be remarked in passing that a perceptible advance in art expression has been made here in many directions, perhaps most notably in architecture and in interior decoration. A growing dissatisfaction with old professional methods of photography is also observable in the fact that various members of the club have increasing applications for portrait work, though this has been quite unsolicited.

To understand the animus of the Newark Camera Club one must



BY DR. C. L. WYETH

ON THE RIVER

understand its leader. Professor O. W. Beck, a painter of the keenest judgment and most cultured taste, says of him: "Mr. White has a nearer conception of what is the true sphere of photographic art than any other worker. He reaches this enviable conception of picture-truth through his right instinct, and he holds to it against criticism, because his moral courage as an artist is as great as his gift." An artist who has just returned from a three years' residence in Paris had with her while abroad a small collection of Mr. White's pictures, which she showed one evening to a group of the most distinguished of American painters. They were surprised almost beyond expression. One of their number exclaimed, "What is to become of us if a machine can do things like these?" Another insisted that they could not have been taken from life, but must have been photographed from paintings. It surely is no small thing to have broken away from established precedents and to have achieved something to arrest the attention and to compel the admiration of a cultured and critical company such as this.

Mr. White's work is so far out of the ordinary that, to one seeing it for the first time, it almost seems to carry with it a challenge. But it is vastly significant that many people who have begun by regarding his pictures as



BY EWA SPENDER

A MUTE APPEAL



BY CLARENCE H. WHITE

"WHAT SHALL I SAY?"

aggressively displeasing, have finally come to see and to acknowledge their suggestive and uplifting qualities. "The eye only beholds what it brings the capacity to see." The constant exhortation of Mr. White to those who are glad to profit by his counsel is toward the cultivation of this "capacity to see." Grant Allen very suggestively says: "It is impossible to *make* people admire beautiful things; but if you begin by trying to comprehend them you will find admiration and sympathy grow with comprehension." It is, perhaps, unnecessary to refer to the prominence of Mr. White's position among the foremost pictorial photographers. His place upon the Chicago and Philadelphia juries, his election to that most exclusive order, "The Linked Ring" of London, his one-man exhibition in New York and the solicited exhibitions in England, Germany and France, seem but meet recognitions of his ability. These honors have come to him unsought, for nothing is farther from his nature than self-aggrandizement. His ambitions flow in delightful channels through Utopian fields, and achievement is more to him than acclamation. "Possessed himself by a heroic passion, he uses matter as symbols of it. The sensual man conforms thoughts to things; the poet conforms things to his thoughts." His sense of the beautiful and true has the swiftness and unerringness of an intuition.

Mr. White's mastery of composition is no less a marvel than his fine rendering of tone. The simple treatment and soft, silvery tones in "Old



BY T. M. EDMISTON

CARVING THE NAME

Fashioned" have all the quaint charm of the best old daguerreotypes, those delightful subjects of a lately revived interest. This picture, while charming in tone, is not flawless, and the right arm is certainly exaggerated in length. But this very forcing of certain lines, while apparently in violation of all principles of drawing, will be found, in many instances, to have been done with a purpose. This may also be observed in the right arm of the "Girl Unwinding Yarn," yet note what strength it lends to the composition. And it would be a most unfair generalization to infer an unfamiliarity with anatomy from these instances. The correctness of his knowledge in this particular is manifested in the latter picture by the manner in which the beautiful, flowing lines of the drapery are made to properly accent the figure. And this knowledge, gained from his studies of the nude, saves his figures from the danger of disagreeable distortion, no matter with what "poetic license" they may have been treated.

"What Shall I Say?" is an example of his earlier work, and is more material and photographic than the things he is striving for now, although it has, as well, an interesting spiritual quality. The idealized portrait of a young girl is representative of some of his latest work, and the original print shows a feeling and refinement beautiful, indeed.

Prominent among the members of the Newark Camera Club is Mr. T. M. Edmiston. He has made some exceedingly creditable and ambitious pictures, especially in outdoor arrangements. His pictures have been said to show the influence of Mr. White quite markedly. Mr. Edmiston was represented in the American Institute for 1899, and in the Philadelphia Salon for 1900. Three of his pictures were accepted—"In the Woods," "Carving the Name" and "On the Hillside." A very gratifying honor was also conferred upon Mr. Edmiston in the selection, by Mr. Steiglitz, of his picture, "On the Hillside," to be sent in a collection of seventy prints, representative of the best American work, to be hung in the International Art Exposition at Glasgow. The skillful manner in which the daring line of the tree trunk in "On the Hillside" has been decentralized makes this a particularly strong bit of composition. And both this and "Carving the Name" have fine qualities of tone and atmosphere.

Miss Dasie G. Cherry had a picture, "Portrait of Miss C.," in the Chicago Salon for 1900, a success the repetition of which a waning interest has prevented. Miss Bertha Dille is another member of the club of extremely artistic tendencies, who has accomplished some very clever landscape work and who would surely make a reputation in photography if her enthusiasm equaled her talent.

Dr. C. L. Wyeth's picture, "On the River," with its exquisite distance, atmosphere and fine composition is held among the club's choicest things. Dr. Wyeth also has a series of very clever cat studies that have attracted much attention. Mr. Emmett M. Baugher's work is confined almost exclusively to figures, and he has conceived some decidedly original portraits. Reproductions of "The Judge," "Reading" and "A Profile" appeared in the Chicago *Brush and Pencil* for November, 1898. Mrs. Mary R. Stanbery and Miss Katharine S. Stanbery of Zanesville, Ohio, while not members of the Newark Camera Club, have been somewhat closely associated with it and are in sympathy with its aims. They exhibited in both Chicago and Philadelphia last

year when the standards were exceptionally high. In Chicago Miss Stanbery's "Arabian Nights" and Mrs. Stanbery's "Bar-Maid" and "The Girl and the Book" were hung. The Philadelphia jury accepted Miss Stanbery's "Portrait of Dr. Stanbery" and Mrs. Stanbery's "Bar-Maid." This picture, which was reproduced in the last number of *Camera Notes*, is a fine example of the skillful handling of humble material. It, also, has the honor of having been chosen for the Glasgow exhibit.

"Posing the Model" by Mrs. Stanbery, has a very beautiful, mysterious and idealized quality, and has received the warmest commendations of several painters of high standing. It, perhaps, more than any of her other work, shows the influence of Mr. White, a fact that may be partly attributable to the introduction of Mr. White's own model as the chief figure. "Betty Barker," an illustration for "Cranford," is a most chic and clever example of Mrs. Stanbery's very latest work. "Lady Glenmire," also an illustration for "Cranford," is one of Miss Stanbery's latest pictures and certainly among the most beautiful.

While their work at times has some unevenness of execution, yet it almost always shows great vigor and originality of conception. Miss Stanbery's "Birth of the Poem," for instance, seems theatrical in its rendering in comparison with other things she has done, and is a far cry from her best work. Miss Stanbery spent some time in Miss Ben-Yusuf's studio in New York, and has made some most delightful studies. "Arabian Nights" and "Bar-Maid" were included in Mr. F. Holland Day's recent exhibit of American prints in Paris.

Positive qualities antagonize some people as strongly as they attract others, consequently those who do not admire the work of Mr. White and his followers, are apt to severely condemn. True criticism is one of the greatest aids to development. But to subserve its highest purpose it must be intelligent. There are certain questions that a critic does not ask primarily and to questions of this sort the best possible answer is silence. Any justification or defense of the methods of this club would perhaps be futile. However, its members are actuated by the sincerest impulses and thoroughly indorse Professor Beck's postulate that "art is above all things an interpreter of the artist's character, his emotion, his intellectual powers, and it is his nature that the finished photograph must reveal."

Feeling that the hard, dry, accurate photograph, while it has its place, is not an adequate means of individual artistic expression, they naturally turn for criticism and guidance to those whose æsthetic standards have been formed by a study of art, rather than to those who would limit photography's legitimate field to the making of mechanical records. A newspaper account of an affair may present an accurate picture of an actual occurrence; a poet's version of the same scene might convey quite as adequate a conception, but the two would be utterly dissimilar and there could be no doubt which would have the higher literary quality. The poet recognizes the legitimacy of the reporter's position. Why should the reporter quarrel with the poet?

THE WORK OF THE "WHITE SCHOOL,"
BEING REPRODUCTIONS FROM THE
LATEST PRINTS BY THE FOLLOWING
MEMBERS OF THE NEWARK (OHIO)
CAMERA CLUB: CLARENCE H. WHITE,
MRS. MARY R. STANBERY, MISS KATH-
ARINE S. STANBERY, T. M. EDMISTON
AND MISS EMA SPENCER : : : : :



OLD FASHIONED
BY CLARENCE H. WHITE



RESTING
By CLARENCE H. WHITE



GIRL UNWINDING YARN
BY CLARENCE H. WHITE



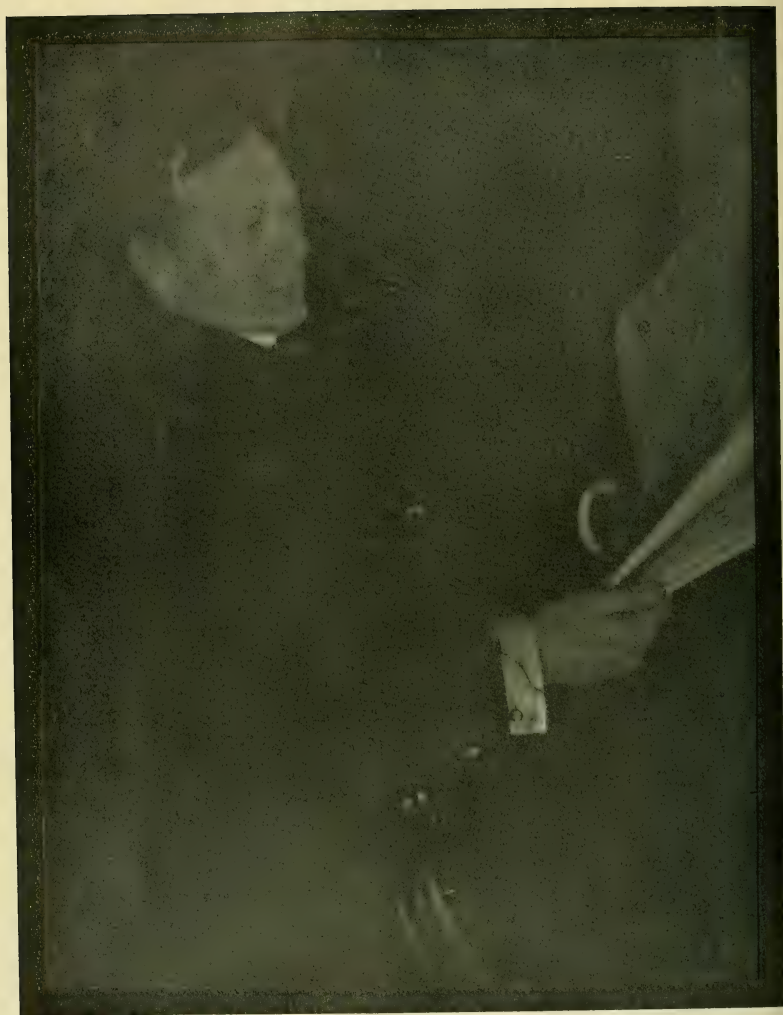
ON THE HILLSIDE
BY T. M. EDMISTON



DANDELIONS
BY EMA SPENCER



NANETTE
By EMA SPENCER



A SAN FRANCISCO MAN
BY EMA SPENCER



MISS F. AS BETTY BARKER IN "CRANFORD"
By MARY R. STANBERY



POSING THE MODEL.
BY MARY R. STANBURY



LADY GLENMIRE, FROM "CRANFORD"
BY MISS KATHARINE STANBERY

THE ELEMENTS OF PHOTOGRAPHIC EXPOSURE

BY F. M. STEADMAN

IN TWO PAPERS—FIRST PAPER.

The study of the elements of photographic exposure in its minuteness is the study of light and color in nature. It is based on the laws that continually play between light as it shines and the surfaces of matter as they receive it. This knowledge should remove the almost universal confusion that exists concerning exposure, and replace it by a recognition of physical conditions which are, in truth, simply the statements of problems, and which can be analyzed with almost the same exactness as a problem in geometry.

Exposure tables are practically useful because they are based on experience, but they are not a study of nature any more than the receipt for making a pudding is a study of the chemistry of foods. With regard to the laws of surfaces, exposure meters must necessarily disregard almost entirely the laws of the reflection of light, measuring the light absorbed, and then, to a practical degree, only that which comes to its surface from those points in space which lie nearly in front of it. Their makers disregard the study of the scale of contrasts, but overcome the difficulty to an extent by directing that the meter should be tested with reference to the position of the least illuminated object in which detail is desired.

Referring to the writings of Mr. Alfred Watkins, as quoted in the *British Journal Almanac* of the present year, page 684, he gives some exceptional cases in which exactly the contrary method must be observed, and makes in place of a scientific explanation of the facts of nature, the statement that the "judgment of the photographer will tell him" that the directions are correct. The fact is that the judgment of the average man tells him very little indeed, especially if his experience be limited. What is needed above all things in photography is a fundamental explanation of the laws of nature, which, with experience, will give an individual a true foundation on which his judgment may be based in its growth. Could a teacher say to a child just beginning its education that its judgment should tell it that "ox" is spelled with two and "mouse" with five letters? It would hardly be safe to think so; for the child, having as yet neither knowledge of, nor experience with, language, might base its judgment on the fact of the different sizes of the two animals, and would arrive at a conclusion quite different from the existing facts.

There is not a light-meter made, with all its complicated rings and disks, that will guide a novice as much as a piece of solio or like paper used in the manner I will now describe: Carry a piece of solio in a notebook having a thin, opaque paper back. Keep it next to the cover, and when you are ready to test the light hold it in the place occupied by the brightest illuminated surface which you select or arrange as the part of the subject which is to be the high light in the finished picture. Expose a small bit of the solio beyond the cover of the book, turning it directly facing the light. Hold the book and slip in contact with the left hand by pressing over that part of the book through which the other end of the slip passes. Practice this a step or two inside of a common window. Note the number of seconds required to tint the end of the paper to a degree *just plainly perceptible*. Do not move the slip to see if it is

tinted, but raise the flexible back of the book. This method of measuring is in the first place much more exact than any photometer made, as it is much easier to see when two shades contrast than when they match, as is necessary in the meters. Besides in my Wynne meter, the paper in tinting goes around some "by-way" or other and does not pass by either the light or the dark tint which are painted on the meter, and consequently never match each other in tint.

The number of seconds necessary for this tint to become perceptible is the correct exposure with a certain diaphragm, and under normal conditions of contrast and color will be about 32 U. S. system, not "f" system, provided one is using one of the fast brands of plates or the Eastman film. By normal condition of contrast I mean a scale not too contrasty or too flat, but consisting of those degrees which the photographic plate can easily grasp.



BY DR. F. O. NOYES

BEDTIME STORIES



BY FRANK B. STANDISH

THE SMOKER

If one wishes to make an actual experiment I would advise a table to be placed within a foot of one casing of a common window having a good light from the sky and on the table make a wall of every conceivable article in color from white to black, and of different forms and conditions of smoothness, such as books, stones, cups, flowers, pieces of metal, cloth, etc., and expose a plate on this wall giving with stop 32 the same number of seconds as indicated by the solio. I would advise the use of "rodinal" as the developer simply because it is the same the world over, needing nothing except to be mixed with water in the proportion of one part of the liquid to twenty-five parts of cold water.

If it is correctly exposed the plate will begin to darken in between ten and fifteen seconds, and will be finished in about one-half as many minutes as the required seconds for the image to appear. Stop development when the thickest parts of the image are of sufficient density to furnish practically clear whites on the paper you suppose that the negative is competent to point down to smallest and which would be a for such a subject. the negative is know then that large a diaphragm are using, so try if undertimed, try between 32 and 16, trials you can phragm which, harmonizes with paper in the light,



BY DR. F. K. DETLEFSEN

PORTRAIT

scale of contrasts is, in your judgment, normal, you can always use that same diaphragm and obtain a practically normal exposure. If you do not use rodinal then use your accustomed developer, remembering that the point of greatest density should be as previously stated. Use a normal solution and do not doctor it. Normal exposure can never be learned so long as one is depending upon a doctored developer for a good negative because the mind becomes so infatuated with the absurdities of doctoring an incorrect exposure that it never learns the healthy pleasure of selecting and creating normal contrasts and exposing to normally affect the plate; conditions rarely necessitating a change in the developer. This exposure, as indicated by the solio slip, must be varied accordingly as the contrast is less or more than normal, and as the colors are above or below the average. The following table has been compiled as a guide from which to work. While it cannot be accepted as being applicable to all conditions, it offers a

onds for the im-
Stop develop-
thickest parts of
sufficient density
cally clear whites
intend to use,
the scale of trans-
plete from that
clear glass in the
clearest shadows,
correct negative
If you find that
overtimed you
32 is a little too
for the plate you
another at 64, or
one at 16 or be-
and by a very few
find the dia-
with your plate,
the speed of the
and when the

substantial basis from which to work. It has been carefully prepared from the tabulated records of thousands of exposures and is offered to the serious worker for comparison.

Portrait, normal contrast	Average color, normal test
“ “	Bright “ $\frac{1}{2}$ to $\frac{3}{4}$ times, normal test
“ “	Dark “ $1\frac{1}{2}$ to 2 “ “
Interior “	Average “
“ “	Bright “ $\frac{1}{2}$ to $\frac{3}{4}$ “ “
“ “	Dark “ $1\frac{1}{2}$ to 2 “ “
Landscapes “	Average colors
“ with little contrast	“ $\frac{1}{2}$ to $\frac{1}{2}$ “ “
“ with much contrast	“ $1\frac{1}{2}$ to 2 “ “

A difficulty presents itself in very bright light out of doors by the paper tinting so quickly that it cannot be measured in seconds. This is easily overcome by making a light shield or “retarder” that measures in brightest sunlight a translucency of eight atmospheres. Take a thin discarded negative and place it in a printing-frame with a piece of solio in contact with it and at some time of day when the sun is shining in pure air without clouds expose the frame facing the sun just forty seconds. Shield this well from further light and take another small slip of the fresh paper and expose it to the sun, without anything intervening, exactly five seconds. See that both printing-frame and slip exactly face the sun during the process of tinting. Now compare the slip with the paper tinted behind the negative and find if possible a color in the proof that exactly matches the tint of the slip. If there is none try the forty seconds’ exposure on another old negative until a tint is procured from some part of the negative that will match the slip exposed in the air only for five seconds. When it is found, mark well that portion of the negative that furnished it, and cut out a piece of the negative of a convenient size for carrying in the pocket. Now cut a small hole in a piece of opaque paper and paste it so that the hole comes opposite that portion of the negative that furnishes the tint, on the film side. Let it cover entirely the film side of the meter, and fold it over the back so as to cover it entirely, of course, cutting away a good portion from in front of the hole so as not to interfere with the light passing through the meter. As the paper will tint in a spot through the hole it will be very easy to observe its first appearance. The only difference to be made in the calculation of the meter is that each second required to tint the paper indicates one-eighth of a second exposure with the same stop that would have been calculated with the other method. With a little practice with the plain solio and notebook, and with the retarder in the bright sunlight, and in the analysis of the colors and contrasts of the subjects chosen, one can, in a short time, become efficient in the use of this system of measuring exposure. Leave the camera locked up. Do not think, as so many do, that the intelligence is contained in the fine lens or camera, but begin to appreciate the long-neglected fact that if you arrive at the point where you are doing good work the reason must be intelligence, not in a pet lens or formula that you may have.

A PHOTOGRAPH THAT NEARLY COST THE LIFE OF ITS MAKER

The presence of the battleship Oregon in home waters for the first time in several years brings to mind the story of one of the most famous battleship pictures ever made. It is a picture which tells its own story, speaking eloquently of the daring experience of its maker. In 1894, shortly after the completion of the ship destined to gain a world-wide reputation, Mr. O. V. Lange, now a member of the CAMERA CRAFT staff, was commissioned by the builders to make a series of photographs of the battleship in motion. Arrangements were made by Mr. Lange to take the photographs from the deck of a small tug during one of the speed trips of the battleship. Through some misunderstanding as to signals the little tug started across the bow of the battleship rushing on her course at a full eighteen knots an hour. This is what the photographer said of his experience, to a newspaper man, seven years ago:

"The Oregon was about a hundred yards away, and seemed to be coming like a cannon ball. When the danger flashed upon me I was holding my camera, and I wavered with fright for a moment. Then as I looked upon the awe-inspiring magnificence of the mass of steel above and in front of me and the indescribable beauty of the white, dazzling and foaming wave that glistened in the sun, there flashed on me an exalting and thrilling sense of the sublimity and glory of the scene. Every thought, feeling and action was instant. My judgment told me to drop my camera and rush for a life-preserver, but my professional and artistic instincts triumphed, and there came a determination to get that picture if it was my last. I steadied my nerves a moment,



THE OREGON

glanced into the finder and clicked the shutter. Then, with the camera under one arm, I ran to a stanchion and grasped it. The next moment there was a strange noise of rushing water that wet the deck and a violent whirling and pitching of the tug in a foaming sea.

"The tug had just cleared the stem and struck the feather of the Oregon a few feet from the stern. The great wave threw the tug off like a cork. The tug had escaped collision by the fraction of a second, and the ship's side flashed by within ten or twelve feet."

COMING CONVENTION OF THE PHOTOGRAPHERS' ASSOCIATION OF THE PACIFIC NORTHWEST

BY L. D. HICKS

When the first session of the Photographers' Association convened in Portland on the twenty-fifth of last October it required but a glance around the beautifully decorated convention hall to show the members of the fraternity in charge of the convention that they had miscalculated, and that their well-laid plans had brought forth a result far more than they had expected.

Anticipating that only the photographers of the State of Oregon would attend this meeting, the officers were delighted to find that the gathering consisted of well-known photographers from the States of Idaho and Washington as well as Oregon. The Association had been formed and was in perfect working order before this happy error was discovered, so that the first session of the Association of Oregon carried out its program for a three-day material and intellectual feast, but with the close of the first session came the death-knell of the Association. The last act of the old Association was to disband, so that the new Photographers' Association of the Pacific Northwest might be formed; and, following out the spirit of generosity and fraternal feeling that had marked every hour of the convention work, they placed in the hands of the new organization the funds that were left after closing up the expenses of their own convention, and entered into the work of the enlarged and improved Association with the greatest enthusiasm.

The officers of the new Association were elected so as to give each of the sister States a fair showing. They are:

President, A. L. Jackson, Tacoma, Wash.

First Vice-President, H. D. Trover, Salem, Or.

Secretary-Treasurer, Chas. Butterworth, Portland, Or.

Vice-President for Washington, E. L. Curtis, Seattle, Wash.

Vice-President for Oregon, A. C. S. Aune, Portland, Or.

Vice-President for Idaho, H. C. Meyers, Boise, Idaho.

With such men in charge of the future of this promising offspring of the old organization, its future was assured.

Notices have been sent out to all the photographers of the Pacific Coast that the first annual session of the new Association will be held in Portland, Or., on October 3, 4 and 5, 1901, and the temptation to predict that this will be the largest convention of its kind ever held cannot be resisted. From San Diego to Blaine promises have come that the professionals will send exhibits and attend personally wherever it is possible for them to do so.

These encouraging indications materialized before Secretary Butterworth issued the list of awards which has just been distributed, and with such inducements as are offered no member of the photographic fraternity can afford to miss the opportunity.

The educational value of such a convention can only be realized by those who have attended a meeting of this nature. The leading manufacturers of the United States exhibit their best productions, including everything that is new and up to date, while the most expert demonstrators vie with one another to convince the photographers that their particular line of goods can be made to do anything, and to do it better than any other line of goods possibly can.

At the close of the last convention the writer heard from all sides the cheering comment from the photographers of the Northwest that they would "surely be there next October, if they had to close up the shop and sell the cow to raise the transportation."

The committee on transportation has arranged with the railroad companies to allow a substantial reduction from the regular rates to all photographers wishing to attend. The reception committee has completed an agreement with the leading hotels of Portland whereby the photographers will receive reduced rates during the convention; and, in addition to these advantages, Portland will throw open her doors to the fraternity with the same liberal and hospitable freedom that proved so satisfactory to those who were fortunate enough to be in attendance last year.

The rules and regulations governing exhibits are as follows:

- 1 No exhibitor can enter more than two classes.
- 2 All competitors must be members of the Association, except in foreign class.
- 3 All exhibits must be framed without glass and, except in foreign class, in molding not to exceed one inch in width.
- 4 The Association will exercise the utmost care with all exhibits, but will not be responsible for loss or damage.
- 5 All pictures sent for exhibition must be addressed to H. D. Trover, First Vice-President, P. A. of P. N. W., Portland, Or.; forwarded at owner's risk, charges prepaid, and delivered not later than October 2, 1901.
- 6 Exhibits of manufacturers and dealers to be shipped to Chas. Butterworth, Portland, Or., charges prepaid, and must be in position not later than October 2d.
- 7 Have your box covers screwed instead of nailed, with home address marked on under side of cover for return of pictures. This is necessary to prevent loss. Put screw eyes and picture wire for hanging in the box. All exhibits will be accepted at any time previous to October 2d. No exhibits will be allowed to be removed from the hall until the close of the convention.
- 8 No manufacturers or dealers, or their representatives, shall solicit or do business in the hall unless he or they rent floor space or desk room.
- 9 Competitive exhibits of photographs shall not contain any names or markings that will reveal the identity of the exhibitors. All exhibits will be numbered in the order in which they are received, and the names will be attached only after the awards are announced.

And last, but not least, a certificate of membership may be obtained by forwarding two dollars to Chas. Butterworth, Secretary-Treasurer, 782 Kelley Street, Portland, Or.

CAMERA CRAFT can assure its readers that they will make a serious mistake should they allow themselves to be left out this year.



EAGLE CASCADES



CASCADE LAKE

LAKE TAHOE

ILLUSTRATED BY HOWARD C. TIBBITTS

Among the many treasures that are hidden in the depths of Sierra solitudes, none more surely surprise and charm all classes of travelers than the glacier lakes. There are hundreds of them, the crystal mirrors of which reflect the hues of peaceful, over-arching skies, that are unhonored and unsung; while others, known to the lovers of the beautiful, are enshrined in soulful lines, and have a fame extending far beyond their environment.

Lake Tahoe is one of the largest and most beautiful of these Alpine lakes. It is about twenty-three miles long by thirteen wide, and its greatest known depth is upward of 2000 feet. Situated at an altitude of 6220 feet, it is everywhere surrounded by peaks that rise from 2000 to 4000 feet higher. Bold, picturesque headlands break the shore line; magnificent forests in places sweep down to the water's edge; beautiful and impressive contrasts meet you everywhere.

One of the peculiar attractions of this lake is the marvelous clearness and beauty of its waters, which reflect the wealth of peak, crest and forest, and permit the bottom to be distinctly seen several hundred yards from the shore. The tinting of the iridescent water is exquisite. Near the shore it has a greenish yellow tint; this shades itself into emerald, from emerald into turquoise, which gradually deepens into an indigo blue so dark that in the shadow it seems almost black.



BRIGHAM'S LANDING

A number of popular resorts and many beautiful camping places are located around the lake. The steamer Tahoe, a splendid specimen of lake craft, one hundred and sixty-eight feet long, with comfortable accommodations for two hundred passengers, makes a circuit of the lake daily and stops at the principal resorts. This trip is a revelation to visitors, affording, without fatigue or other inconvenience, a panorama of magnificent mountain scenery not surpassed in grandeur and variety in the world's famous tours.

Lake Tahoe is reached by way of the Southern Pacific Company's Ogden Route. Connections are made at Truckee with the newly completed narrow-gauge railway of the Lake Tahoe Railway and Transportation Company, which extends to Tahoe City, the initial point of acquaintance with this most picturesque scene. For fourteen miles the road follows the windings of the Truckee River, through a narrow valley that possesses its full share of the infinite variations of the Sierra region.

In the high and rugged fastnesses south of the lake some eight or ten miles, is one of the most remarkable chains of mountain lakes in the world. From some of the loftier eminences, Mt. Tallac, for instance, fully twenty may be counted without changing position, each nestling like gems in their granite settings.

The summit of Mt. Tallac is one of the first objective points. It is 9715 feet above sea-level, and is reached by comfortable saddle trail from the Tallac House in three hours; distance, seven miles.

Tallac holds an isolated position and toward all points of the compass the view is unobstructed. Southward is the vast field of wonders embraced by the

high Sierra. The earth giants back of Yosemite are distinctly visible. Westward under the brow of the main range is Desolation Valley and the headwaters of the American River. To the north, a hundred miles of mountain wonders stretch away toward Shasta. About ten miles from Truckee going toward Lake Tahoe, a road branches off to the right into what is locally known as Bear Valley and after a mile or so of picturesque meandering, terminates in a cluster of log cottages that constitutes this popular mountain resort, probably the quaintest place of entertainment in all these Western Highlands.

Bear Valley is in fact little more than a narrow crag-walled, heavily timbered canyon, less than half a mile in width, the irregular summits on either side towering a thousand feet upward and more. Through the entire length babbles pretty Bear Creek, a clear, cold stream from the snow lakes above, affording haunts for the gamiest trout in the whole Tahoe region.

To the weary and jaded photographer the sight of these flowing streams surrounded by snow-capped mountains affords a diversion and ministers to his desire for change. Two weeks at Tahoe means a new lease of life and a capacity to again meet the conditions of life with a free and easy grace.

Especially is this true with him who has spent his vacations near the seashore, where heat and wind at times lend anything but comfort to the day. To spend days in searching the mysteries of the mountains, to seek the fountain heads of little streams and to watch the dawn of day over summits kissed with snow is indeed a vacation, one that ends all too soon.



FALLEN LEAF LAKE

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

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VOL. III

SAN FRANCISCO, CALIFORNIA, JULY, 1901

No. 3

Through an error the Southern Pacific Company was not credited in the June issue with the magnificent series of Yosemite pictures which formed no inconsiderable feature of an unusually good number. The pictures are from a little book entitled "Yosemite," recently issued. Copies of this book can still be had by sending ten cents in stamps to the Southern Pacific Company.

Several times within the past twelve months CAMERA CRAFT A MISTAKEN IMPRESSION has been called upon to correct the statements of various organizations who seek to impress upon the unwary the fact that their several organizations are the largest of the kind in the country. During the past several weeks the editor has been in receipt of no less than twenty communications from indignant members of the California Camera Club calling attention to the fact that the catalogue of the Print Exhibition of the New York Camera Club contained the statement that "The Camera Club is the largest organization of its kind in the country."

Now, CAMERA CRAFT, being the official organ of the largest camera club in the world, feels called upon to issue a challenge to the New York Camera Club and all others who may desire to participate. Following is the challenge:

The California Camera Club, through its official organ, to the camera clubs of the world, Greeting: Whereas, certain assertions have been made by other photographic organizations to the effect that their membership rolls are the largest in the world; and, whereas, we make the same claim, therefore we challenge the several organizations in question to a comparison of strength, the losing clubs to present the winner with handsomely colored lantern slides of the individuals responsible for the extravagant statements which have occasioned this challenge.

Not being willing to take an unfair advantage of the other clubs a time limit of six months will be given, so that clubs desiring to enter the lists may have a chance to enlist new members. At present the California Camera Club has a hundred more names on its list than its nearest competitor—the New York Club—which claims a membership of only three hundred and thirty-three.

And now the yellow press of the country is engaged in describing the sensations of the Chicago photographer who fell out of a balloon and landed on his feet without a scratch. We congratulate the photographer both upon his escape and the advertising.

Although no official action has yet been taken, CAMERA
SECOND SALON CRAFT is in a position to assure its readers that the second
MOVEMENT San Francisco Salon will shortly assume definite proportions.

The date for the exhibition will in all probability correspond with that of the last one. There will be some very important changes made in the rules which were observed at the last salon, the principal ones being the absence of prizes and the establishment of a higher standard.

The influence of the last salon upon the work of Western photographers can hardly be estimated. The rank and file seem to to have been drawn closer, a better feeling established, and a healthier tone pervades where dissatisfaction once reigned.

When you read the advertisements in a magazine and are impressed with the truth and interest of the advertisers' statements, do you investigate further? If not, you are not doing your whole duty, either to the advertiser or to us.

The photographers of the Northwest are an enterprising
THE NORTHERN lot. Last year they formed an association which outgrew
CONVENTION its proposed dimensions so rapidly that the whole scheme of organization had to be reformed. Its members are even now hard at work for the second convention, which occurs in October, and the attractive features so far arranged indicate that the organization is destined to attract attention from all over the country.

With two big conventions to occur in the near future the local photographic dealers should feel happy.



BY OLIVER LIPPINCOTT

SHEEP

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK
CONDUCTED BY H. D'ARCI POWER, M. D.

DEVELOPMENT OF UNDER-EXPOSED PLATES

Alfred Parzer-Muhlbacher (*Photographische Mitteilungen* 15. v. 1901) in a lengthy article, finds all the usual methods of forcing development more or less unsatisfactory. In his opinion the best results are obtained by locally warming the parts that hang back. This is usually done by breathing thereon, but the warmth so applied is not easily localized, nor is it always sufficient. To overcome these difficulties Herr Muhlbacher has devised an apparatus consisting of a metal tube coiled into a flat spiral, which is supported over the plane of the darkroom lantern. Through this spiral air is forced by means of a double bulb such as is used for hand atomizers. A rubber tube ending in a glass or vulcanite lip directs the warm air to the required spot. The inventor admits that it needs to be used with skill and discretion. Undoubtedly the principle is good, the apparatus easily made, and the method worthy of trial. Those who practice instantaneous work may possibly find a good thing therein.

A NEW METHOD OF REDUCTION

How to reduce the high lights of an over-developed negative without destroying the detail in the shadow has always been a problem. Ammonium persulphate has doubtless done much to solve it, and the method of permanganate treatment of the dry negative is perhaps still better. Now we have another plan by M. Blanc (*Bull. Soc. Phot. France*, 1901, page 131), which certainly seems reasonable and simple. If the toning of a silver print is watched it will be noted that the lightest parts are the first to tone. Now, the lightest parts of a negative are the details in the shadows, and if a negative be toned in gold solution these parts will take a deposit long before the high lights have undergone much change. If at this point the partially toned negative be immersed in Farmer's solution it will be found that the fine details, owing to their conversion into gold, will remain unattacked whilst the dense high lights, consisting in greater part of silver, undergo rapid reduction.

The toning bath recommended by M. Blanc is made as follows: Potassium sulpho-cyanide,

4 grams; mercuric chloride, 1 gram; water, 100 c. c. Of this take 20 c. c. and add one per cent solution of gold until a light yellow precipitate commences to form and then apply it to the negative with a soft brush. After toning and washing, the plate is reduced in Farmer's solution, made by dissolving 5 grams of potassium ferri-cyanide and 10 grams of hypos in 100 c. c. of water.

FLATTENING PRINTS

All of us from time to time are under the necessity of dealing with curled or crumpled prints, and many of us make a mess of it, for which reason the following remarks from the *British Amateur Photographer* are likely to be useful:

From time to time a paragraph appears in one or another of the photographic papers dealing with the flattening of prints that have become rolled up or cockled through being allowed to dry spontaneously. The instructions are that the print must be flattened out face down on a pad, pressed down under the edge of a ruler, and then sharply drawn away from under the latter. Whatever precautions are taken with regard to the surface of the pad, the mere friction is bound to have a deleterious effect on the face of the print. In fact, with the very delicate gelatino and collodio-chloride emulsions, not only will the surface be scratched, but it may be cracked, and pieces of the film will sometimes be torn off bodily.

But there is not the slightest necessity for subjecting the face of the print to friction. The cockled print should be laid, face down, on a strong sheet of paper slightly larger, and smoothed out with the hand as much as possible. The print and paper are then placed on the pad together, the paper being nethermost. The two are firmly held together at one end, and the smoothing-out or ironing is proceeded with as usual. The effect is that the intervening sheet of paper receives the whole of the friction caused by the pad, and the printed surface comes out of the ordeal scatheless.

The intervening sheet should be strong (*i. e.*, capable of resisting tension without tearing), smooth and thin. When it fulfils all these requirements to a high degree, two sheets may be used, the print being sandwiched in between. This procedure eliminates friction both from the face and from the back of the print.

Further, a word or two as to the angle which the print makes with the pad while it is

being drawn under the straight edge, and as to the shape of the edge itself.

The first time the print is drawn under the edge the angle should be small; that is, the print should be nearly horizontal or parallel with the pad. The next time it should be raised a little nearer to the vertical, and so on each succeeding time. The reason for this is as follows: Prints always cockle face inwards. At the end of the ironing process there is generally a slight curvature in the opposite direction. Clearly the sensitive surface must have been stretched to a certain extent. If this stretching is made to reach its maximum suddenly the surface is almost sure to crack. By proceeding as above, the stretching is effected gradually, and so the danger of cracking is minimized. The edge of the ruler should be round at one side at least, and that the side in immediate contact with the print.

Speaking of the *English Amateur Photographer* reminds me of a paper in the 17th of May issue of that journal that is worthy of careful reading. It is by the well-known writer, the Rev. F. C. Lambert, and shows us how, given a landscape of normal proportions, we may either broaden out its details or heighten the altitude at the expense of breadth. To understand how this is done let us look at a pair of spectacles designed for that common optical defect known as astigmatism. If a landscape be viewed through such a glass, held at a particular angle, all its details will lose in height and gain in breadth. If now the glass be turned half way round, the conditions are apparently reversed, the distant mountain gains in altitude, the reeds in the foreground grow taller. The extent of these departures from the normal is proportionate to the focal length of the lens, which, by the way, is known as a "cylinder," and may be either — or —. What a lens will do for the eye, it will also accomplish for a photographic plate, and Mr. Lambert, acting on this idea, placed a twenty-four-inch minus cylinder behind his eight-inch symmetrical lens using as a stop a narrow slit one inch by one-fortieth inch, and therewith made photographs of a tree and cottage. In the drawing with which his article is illustrated this cottage is either tall and slim, or broad and short, according to the direction of the axis of his cylindrical lens with the plate.

It is easy to conceive of conditions under which such a power might be of considerable value. Take, for example, a landscape of far-extending sand dunes, sea, and cloud, in which a low, broad effect is the artist's aim. If the foreground objects lie too high, or a tall tree in the middle distance spoils the effect,

it is only necessary to take the view through such a combination, and the offending objects would gain in breadth at the expense of height. On the contrary, the scene desired might consist of lofty mountains and stately pines; by rotating the cylindrical lens these would grow in height. Its possibilities are not confined to landscape. Ladies with Mongolian features would undergo a subtle transformation towards the perfect Caucasian oval; and damsels with the profile of the native eagle broaden into the mellow rotundity of the dove. With this power added to that of the retoucher, our fair partners may alter their pictured features to taste. The reader may gain an idea of what can be done in this way by viewing a collection of portraits through a spectacle lens used for astigmatism, first using one axis and then turning it half way round for the opposite effect. Lastly, it is to be remembered that from a normal negative a transparency can be made, and from this the modified negative by photographing the transparency through a cylindrical combination.

COPYING PICTURES IN BOOKS

There appears to be no end to the devices for effecting this end, but, among the many, a method recently recommended by the *British Journal of Photography* seems particularly good. It says: "When a page from a book is to be copied, it is more readily done by placing a piece of plate glass against it, and backing the page against it by suitable means. The method we have seen adopted is to supply the usual copying screen, erected on the board that carries the camera, with a casing in which slides a piece of glass. The book is laid flat, opened at the required illustration, and the leaf set upright, its back lying just below the level of the glass. The glass is then slipped in position in front of the page, and the latter kept flat by means of a stiff millboard, kept pressed against leaf and glass. When all is in position and an exposure made, it is simply a matter of replacing one illustration by another, or sliding the glass away for a moment, and packing the next required print as before against the glass, to find everything in focus and ready for an exposure."

Through unavoidable circumstances Mr. Theodore Kytka has been unable to contribute to his department this month. He has, however, an article in preparation that will prove a surprise.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

COATING PAPER IN GUM WORK

A correspondent in New York finds it difficult to secure an even coating, and asks as to the best method. The coating should be done with a two-inch brush, known as bear's hair. The paper is pinned down to a board with a couple of sheets of blotting paper an inch or two larger beneath. The blotting paper absorbs the excess and allows the paper to be evenly coated to the extreme edges. Using the brush rather full, spread the mixture as evenly as possible over the paper by working first from left to right across, and then give the board a half turn and work across in the other direction. Allow the coating to soak in and expand the paper for a few seconds, meanwhile releasing the pins. Replace the pins and then proceed to soften down the coating. This is done with a four-inch badger's hair blender. It should be held vertically and passed rapidly over the surface of the paper, using a series of short, quick jerks instead of the usual sweeping motion. This motion is hard to describe, but a little practice will enable one to note the particular action of the brush that is most suitable. The softening should be continued until the paper shows no uneven, cloudy spots. The mixture will allow plenty of time for rapid work, if it has not been mixed too thick or evaporation allowed to take place before coating. The badger's hair brush should be washed out and dried after coating each sheet if uniformity is desired, but it is not absolutely necessary.

THIN FILM COLOR SCREENS

One of my correspondents remembers having read of thin colored films being used as color screens at the diaphragm slot, but says that if directions for the making of these films were given he has forgotten them. I have just received a letter from a friend who experimented on the subject years ago. In answer to my queries on the subject he says: "A sheet of plate glass is cleaned and waxed with a solution of beeswax in turpentine, and then coated with plain collodion. When this has set it is placed in a dish of clean water until

it appears smooth, and then set up to dry. One ounce of fine white gelatine is dissolved in twenty ounces of water by using only a gentle heat. When dissolved, the white of one egg is added with thorough mixing and the temperature of the solution raised to the boiling point. This will coagulate the albumen and clarify the gelatine. Ten grains of Berlin aurantia are then added, and the solution filtered. The glass plate is now leveled and enough of hot gelatine solution poured on to cover the plate. When this sets stand upright to dry, coat again with plain collodion and once more stand upright to dry. It can then be stripped from the glass and cut into pieces as required. Diaphragms are made of two thin pieces of brass one-half the thickness of the regular ones and pieces of this film glued between them so as to cover the opening. Pieces may be glued over the apertures in the regular stops, but it is not so neat a way of working. An alcoholic solution of tumeric also makes a good coloring material, and the use of various dyes and stains may be experimented with."

A correspondent has been using plain PRINTING ON PLAIN SALTED PAPER salted paper, but finds he can only get

good prints from very contrasty negatives. If he will use twice the amount of potassium bichromate in the salting solution he will find that very good prints can be obtained from weak, flat negatives. This increase of the bichromate will slow the printing to a considerable extent, but no bad results will follow a reasonable increase in the amount used. I have used as high as half a grain to the ounce of salting solution where extreme vigor was required in the print.

Where only a few prints are to be titled, and it is not desirable that the negative be marked in any way, it is a good plan to get a little moist gamboge of the artists' supply man and mix it with just enough water to cause it to flow nicely from the point of a soft pen. With this write the desired title on some part of the paper that will be printed

dark in the finished print. It dries almost instantly, and as it protects the paper underneath from the action of the light, the letters will come out clear white when the color comes off in the wash water. Care should be taken to use a very soft pen, so as not to scratch the film of the paper.

Did you ever stop to think how much more satisfactory it would be to take a subject and try and make a picture to fit it than to go around taking a snap at almost anything in the hope of getting something good to which you could fit a title afterwards? The first plan was certainly the method of that master hand, H. P. Robinson, not to mention a few others who have made their mark under the focusing cloth, and the example is well worth following. Take a motto, trite saying, or suggestive title, and give it a little thought from day to day. Think of the possible variations of the theme. Think out the most suitable setting and figures for the particular adaptation of the theme that you feel is most suited to the capabilities and conditions of your work. Look for the spot and select the subjects, or at least likely ones. Waste a few plates on the spot with different lightings. Sketch in roughly the positions of the figures and determine on their pose, their dress, whether light or dark, and you will find yourself constantly seeing new arrangements, new situations and new

subjects until you will have hard work keeping to your original idea. If a picture in every sense of the word does not result, you can at least congratulate yourself that you have learned more in the attempt than you would have done in months of aimless plate exposing.

In one of the late numbers the editor protested against the use of slang, particularly that phrase of it which designates the hand-camera worker as a "fiend," and the like. While in thorough harmony with him in his justifiable protest, I would like to enter a mild dissension of my own. How often do we hear the words "only an amateur," "good work for an amateur," and the like. Even the heading of this department is construed to mean something entirely different, by the majority of the readers, from the idea intended to be conveyed. While at all times at the service of the beginner, this department is devoted to photographers only as they are distinguished from the professional class, whose interests are in a measure on slightly different lines. When we say "only an amateur" we forget that some of the best photographers in the world are amateurs, and proud to be known as such. When we say a certain picture is "good work for an amateur" we mean that it is very well done for a beginner. Let us try and be a little more correct in our own use of this term, to the end



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A BORTAIL FLUSH

(A Print that attracted much attention at the recent exhibition of the Capital Camera Club of Washington, D. C.)

that others may be led to observe the distinction.

A correspondent in Chicago PRINTS ON CANVAS wants to know how some prints on canvas were produced. He praises them very highly, and I can only guess as to the mode of production. They are most likely carbon. While there are several solutions on the market for sensitizing fabrics, the results are seldom up to the standard that would merit such strong praise as my correspondent bestows, particularly on such a rough surface as canvas. Ordinary painted canvas, such as is used by artists, is the best. It is tacked tightly on a board and the surface paint scrubbed off with a nail brush and soda solution. The surface of the fabric must be quite bare, only the priming being left. Three or four coats are applied of the following solution:

Cooking gelatine.....	6 ounces
Sugar.....	3 ounces
Glycerine.....	3 ounces
Water.....	.45 ounces
Chrome alum solution, 20 per cent.	2 ounces

The canvas is placed on a broad board over a large tray, face upward. The print, which has been exposed, developed and dried on the temporary support as usual, is placed face upward in a flat dish, and the warm solution poured over it. Air bells are removed and the solution well distributed with a brush. The bulk of the solution is then poured on the canvas and before it runs off the print is lowered into position and the squeezer applied to remove the excess of solution between the print and the canvas. After drying thoroughly the temporary support is removed, any remaining waxing solution cleaned off, and the print mounted on a stretcher. In the preliminary coating, as each coat becomes dry, the surface should be smoothed off with

fine sand paper to remove any unevenness that may show or lint that may wash up from the surface of the canvas.

Do not for one moment imagine that, KEEPING QUALITIES OF THE ROLL FILM because the date stamped on the roll of film you buy has passed and gone, the film is no longer good. Within the last week I have had the fact impressed upon my mind that it is not the length of time that has passed between the coating of the film and using of them, but the conditions under which they have been kept, that causes them to deteriorate. Early in the week a friend came to me with a sorry tale of spoilt films, and I found that he had packed them in a tight box along with a lot of hunting clothes that were almost dripping with salt water, and then expected them to be all right when unpacked almost a week later. A day or so after another friend, wishing to show me some extra fine film negatives, offered as an excuse for the reckless snapshooting that the films displayed, the statement that the roll was one he had found put away in his desk, and, as its time limit expired last September, he had no hopes of getting good negatives on them, but simply wanted to "fire them off." Before the week was out I met a friend at the club, an old professional who is about to start on an expedition through New Mexico, Arizona and the like, to photograph the Indian types there. He had been out that day trying three rolls of films, part of a large lot, the time limit on which expired November 1, 1900. Every one came out perfectly clear and free from any indication of deterioration, and he will lay in his supply from this stock, particularly as it is offered at a slight discount on account of the prejudice against expired films.

THE PROFESSIONAL

CONDUCTED BY O. V. LANGE

A CIRCULAR PANORAMIC CAMERA

An article published in one of the dailies, describing a camera by means of which a complete circle can be photographed at a single exposure, recently attracted my attention. The writer says that the instrument is so arranged that the operator may photograph any part of a circle, and that it is beyond the experimental stage, which is shown by a complete circle taken recently of

the town of Ione and the surrounding hills and valleys, proving conclusively that the machine will do the work for which it is intended.

In true provincial press style, the writer says that this invention supplies a long-felt want in the photographic world, and that "photographers in every country have been working for years with ceaseless energy to invent a machine capable of performing this

wonderful feat, but at the present time there is no other machine that will do the work." I have no doubt that the forepart of the statement is true, and that a camera has been so constructed as to photograph a complete circle, but I most decidedly beg to differ in regard to the accuracy of his last statement.

Now, it is a well-known fact that as far back as the old daguerreotype days sensitized cylindrical copper plates were used, upon the outside of which a lens revolved, driven by clockwork, so that a complete circle could be taken. In fact, there is a record of M. A. J. Martens, of Paris, using one successfully in 1847. Then, again, Dr. T. Sutton, of London, a learned man and prolific writer on photographic subjects, experimented with this work. In 1858 he invented and patented a camera and a new panoramic lens, intended to do away with the distortions prevalent in

ramic," and not "plane," so that the horizontal line of objects will vanish in curved, and not in straight lines. For example, if a front view of the Ferry Depot, at the foot of Market Street, is taken with such an instrument, the roof of the building would gradually curve downward from the center of the picture toward each end. Therefore, scenes must be selected which contain no straight horizontal lines, either above or below the true center.

There is one more incongruity. When taking a complete circle the points of the compass become lost and a false impression is produced.

If the long photograph is bent around to form a circle, so that the two ends of the same point join, and viewed from the center, then a very good idea of the lay of the surrounding country can be obtained.

It is safe to say that nothing is gained by



FLOWER SHOW IN THE FERRY NAVE

this class of pictures. In 1861 Mr. J. R. Johnson, of Red Lion Square, also made an instrument for taking panoramic views, including any angular extent up to three hundred and sixty degrees, upon a flat plate, and with a common view lens operated by clockwork. Very successful views of Swiss scenery were taken with this instrument. By giving these facts I do not wish to belittle the results achieved by the young inventor. It is only to correct the erroneous statements of the newspaper man.

The question is often asked, "Why do we not see some of these wonderful panoramic photographs?" The reason lies in the fact that the subjects adapted to this handling are few in number, being naturally topographical photographs with very little pictorial merit. Another limitation is that the perspective of the picture will be "pano-

taking in an angle of more than one hundred and sixty degrees, the angle covered by the modern Eastman or Al-Vista panoramic cameras. The accompanying illustration is an interior of the north end of the ferry nave, where the late flower show of the California State Floral Society was held last May. As will be seen, I selected the view so as to have all of the principal straight lines slanting diagonally to the center as the vanishing point, thus keeping the lines in order. The six-second fan was used, so that the lens swung around slow enough to get plenty of time, thus securing a very pleasing effect.

Mr. Frank H. Doyle, the well-known representative of the American Aristotype Company, should now be addressed at 643-645 Market Street, he having recently changed his quarters.

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS
CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

The members' exhibit, the lecture, the prize camera drawing, and the hop—the last two especially—took us away from “hypo” and “pyro” for a brief space of time, and it was a relief as well as a pleasure. As bad friends of the lens and shutter as we are there are times when to forget is a pleasing diversion. Strange that we had not discovered this before, but it has just dawned on us, and now, by contrast and variety, we expect to enjoy the coming season. The criticism below by Mr. Louis A. Lamb tells of our members' exhibit and voices the popular opinion. The annual outing on May 30th was an unusually good one. Five carloads of amateur photographers and their friends made up the special train that landed us at Pottawattomie Park on Decoration Day. The usual picnic happenings occurred, ants in the jelly and grasshoppers in the lemonade, to say nothing of the countless number of plates exposed—both the dinner and sensitized varieties.

The coming salon is in full swing, and every one of the committees are working with coats off and sleeves rolled up to make it a Chicago success.

THE MEMBERS' SPRING EXHIBITION

BY LOUIS A. LAMB

Noteworthy advances are shown in the Members' Spring Exhibition. There is nothing of the debatable extreme type of modern “pictorial photography,” but there is an abundance of work of what may be called the “rational school” of the “ultra cult.” About one hundred and forty works are hung on the walls of the society's rooms at the Art Institute, the opening view of which had, fortunately, been appointed for the evening of the fifteenth of May, concurrent with the most noteworthy entertainment in the recent history of the society. Several hundred members and their guests enjoyed the program of music, lantern slides, conversation and refreshment provided, and zest was added by the drawing of numbers entitling lucky ticket-holders to seventy-five prints which had been contributed by members as souvenirs of the occasion. A novelty was the drawing of three hundred tickets to find the winner of a

handsome 5 x 7 camera offered by the society

Mr. W. B. Dyer and Dr. Frederick Detlefsen unquestionably led the society in excellence of product if the showing of this exhibition may be taken as a criterion. Mr. Dyer, of course, has had the advantage of very extended salon work in the past, and his pre-eminence, however well earned, put him *hors concours* in club exhibitions. Dr. Detlefsen's work commands the highest praise for its originality in the chemical and manipulative branches of platinotype printing; but its artistic qualities are considerable as well. Few men of strictly amateur classification can claim the honor of inventing a wholly new developing agent for platinum paper. Dr. Detlefsen has done this, and his prints have a distinctive quality and a unique merit. He obtains pure charcoal effects on ordinary platinotype papers without recourse to any of the modern glycerine-brush methods of manipulation; hence his results are beyond cavil. They are “simon-pure photographs,” without artifice or sophistication of any kind.

W. F. James shows highly artistic enlargements from well-chosen negatives; Edward L. Bourke is represented in a number of prints showing fine feeling and laudable technique, and Professor Blackburn exhibits many pleasing landscape studies. Other exhibitors are: Mrs. A. C. Withrow, Robert Craik McLean, Dr. F. B. Noyes, A. V. Abbott, R. L. Winchell, W. A. Morse, Dr. J. W. Walker, W. J. Meyers, E. M. Blaine, Marshall Wait, E. K. Dyson, Dr. Charles H. Parker, H. A. Stempel, W. L. Wyman, G. F. Snyder, Frank Snyder and L. A. Lamb.

The Voigtlaender & Son Optical Company announce that whereas hitherto they have been able to fit only their series three Collinear lenses to folding pocket kodaks, they are now able to fit the well-known series two to the number three folding pocket kodak. This series, so favorably known as one of the best high-speed lenses (opening f-5.6), should make an exceedingly popular outfit when supplied with compact film or plate cameras, as it is four times as rapid as the average hand camera lens.



BUSINESS NOTES



The Rotograph Company has a big prize competition under way, particulars of which will be found in our next number.

So confident are the makers of the Cheap Exposure Meters, the Expodak Company of Charlottesville, Va., in the satisfactory working of their instruments, that they offer to send one on ten days' trial for 35 cents. A fairer offer could not be made to the amateur.

To the photographer who is looking for a place to spend his vacation and especially the one who wishes to get away from the beaten paths of the summer tourist, nothing could be more valuable than a little book just issued by the California Northwestern Railway, entitled "Vacation 1901." The little book contains the addresses of persons living along this road on ranches or in the towns, who will be glad to receive guests. Full descriptions of the various places are given, together with surroundings, charges and special inducements. The California Northwestern Railway is known as the picturesque route of California, and is one of the most popular routes with photographers. Copies of the little book can be obtained upon application at the office, 650 Market Street.

In order to secure specimens of work done with the new Plastigmat lens, the Bausch & Lomb Optical Company offers a cash prize amounting to one hundred and fifty dollars. The contest closes on July 20th, and the following conditions must be observed:

No restriction is given as to size or subject. Exhibits will be judged on the basis of artistic composition, interest of subject and the extent to which the optical possibilities of the lens are demonstrated.

Negatives or negatives and prints may be submitted.

We must have assurance that negatives are made with Plastigmat f-6.8.

Exhibits must be in sealed package marked "Plastigmat Contest," and with an assumed name referred to in a sealed letter also marked "Plastigmat Contest." The letters will not be opened until after the awards have been made.

Competent and disinterested judges will pass on exhibits.

It is understood that we have the right to reproduce any picture submitted whether copyrighted or not, and that the ownership of

negative will remain with the contestant if desired.

All contestants will be notified of result of contest, and due credit will be given to all pictures used. Prizes will be paid on the 30th day of July.

The Voigtlaender & Son Optical Company of West Twenty-third Street, New York, announce the outcome of the competitive exhibition of pictures made with Collinear lenses, the conditions of which were announced in April. The decision of the judges has just come to hand, and is as follows:

Fifteen dollars in cash for the best print, 5x7 size or over, showing high speed, instantaneous work, to Mr. S. Seaman Jones, New York City. Subject: Trotting horse making 2:30 record, f-5.6, exposure 1-600 part of a second, Collinear series two.

Fifteen dollars in cash for the best print, 5x7 size or over, showing time work, half second exposure or more, to Mr. George D. Morgan, Wilmington, Del. Subject: Store interior, f-32 twenty-minute exposure by electric light, Collinear series two.

Ten dollars in cash for the best print, 4x5 size, showing high speed, instantaneous work, to Mr. George C. Embody, Hamilton, N. Y. Subject: Birds at sixteen to twenty-eight inches, f-5.6, exposure 1-100 part of a second, Collinear series two.

Five dollars in cash for the best print, 4x5 size or under, showing time work. Subject: Child's portrait, f-5.6, exposure over half second, Collinear series two, Mr. Frank E. Bronson, Painted Post, N. Y.

Five dollars in cash for the best print made with No. 2 or No. 3 folding pocket kodak, or No. 3 folding Weno Hawkeye camera, to Mr. Warren E. Hill, Brooklyn, N. Y. Subject: Bridle path, Prospect Park, Brooklyn, N. Y., f-6.8, exposure 1-100 part of second, Collinear series three.

Judges — Messrs. Alfred Stieglitz, Dr. Theodore G. White and W. W. Comstock.

The Voigtlaender & Son Optical Company were so well pleased with the interest taken and the number of competitors that entered pictures in this exhibition that they are making preparations for another competitive display and offer of prizes, to take place late in the fall, when they hope that the number of exhibitors will be even larger than this time, owing to the many kodaks and larger cameras fitted by them during this spring and summer, which are expected to give an excellent account of themselves.

NEWS OF CLUBDOM

CAMERA CRAFT IS THE OFFICIAL ORGAN
OF THE CALIFORNIA CAMERA CLUB,
THE SAN DIEGO CAMERA CLUB, AND
THE PENDLETON (ORE.) CAMERA CLUB

RIVERSIDE CAMERA CLUB

The Riverside Camera Club held its first public reception and print exhibit on Saturday, June 22d. The rooms were open from two until ten, and a fruit punch was served by the ladies. The attendance was large, and the pictures greatly admired. The club feels much encouraged on the success of the exhibit.

The Riverside Camera Club was organized on February 23, 1901, and has a membership of fifty. It occupies comfortable quarters in the Loring Block, with two well-fitted darkrooms.

SAN DIEGO CAMERA CLUB

The San Diego Camera Club held its regular fortnightly meeting Tuesday evening, June 11th. Before the exhibition of lantern slides the members met in the reception-room and enjoyed looking over the sets of photographs taken at their last outing. New displays of exquisite bits of local scenery were made by Professor Kelsey, Mr. Jackson and others.

VALLEJO CAMERA CLUB

The Camera Club, a branch of the Lyceum, organized June 20th, with C. W. McDonald as president, and W. B. Webb as secretary. The club starts with a membership of thirty-eight, and the prospects of an increase are good. It is proposed to arrange excursions and outings for picture-taking, and competitive exhibitions will also be held.

SKAGWAY (ALASKA) CAMERA CLUB

The Camera Club held its first outing June 10th. Smuggler's Cove, one of the most delightful spots in this vicinity was visited. The start was made quite early in the morning, and a day of unalloyed pleasure and recreation was enjoyed. "A good time" was the verdict of all when they returned to the city late in the afternoon, somewhat tired but very happy. Two of them found out something of the temperature of the river and they thought it a "wet time" for a while, but then, perhaps, the less said about involuntary baths on the Camera Club excursions the better.

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For Sale—A well-stocked and patronized photographic gallery in a prosperous Arizona district. Owner grown suddenly wealthy from mining development. Apply to Henry Monahan, 620 Clay St., S. F.

A strictly first-class retoucher, negative etcher, and stippler, who can also operate and assist with most work in studio, desires engagement about September 1st, or would like to rent furnished studio of moderate size. Address Claes F. Ericsson, 56 West Second South Street, Salt Lake City, Utah.

For Sale—One of the leading galleries in San Francisco, Market Street location. Fine opportunity for first-class man. Address J. T. B., care of Kirk, Geary & Co., 220 Sutter Street.

For Sale—A fine photographic car, well furnished. The only gallery in a good town of 2000. Cabinets, \$3.00 dozen. Splendid location for party with limited capital. Address M. D. Sloat, Oakdale, Cal.

For Sale—Photograph gallery in good town, doing a good business. Cheap for cash. Only gallery in town. Good prices. Owner compelled to go East. Address Groves, Livermore, Cal.

\$350 Cash—Will buy a modern, well-furnished Studio in the Mission, San Francisco; \$650 worth of apparatus and furniture in sight. For particulars address L. D. Hicks, 220 Sutter Street.

At—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

A GOOD EXCHANGE MEDIUM
FOR AMATEURS



SUMMER BREEZES
BY F. E. MONTEVERDE

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. III.

SAN FRANCISCO, CALIFORNIA, AUGUST, 1901

No. 4

THAT ESSENTIAL FACTOR — BRAINS!

BY KENDRICK PERRIE

"All in the lens?"

"All in the plate and development?"

"All in the paper and the printing?"

"All in the mounting and framing?"

Nonsense!

It's the man behind the gun that does the work!

Many folks believe photography to be a sort of nickel-in-the-slot contrivance of cut-and-dried preparations; a few half-mechanical operations and nothing more!

A story is credited to one of England's most famous chemists, to the effect that he was once asked whether water was not the most indispensable component in all formulæ.

"No, sir," he replied, with asperity. "There is another ingredient which enters into every formula, whether simple or complex, which does more toward the success or failure of the result than all the rest of the items together."

"And what is the important thing, sir?" queried a student.

"Brains, sir, brains!" retorted the old gentleman, with a sly twinkle in his eye.

There is much truth in the chemist's answer; and yet the majority of amateurs—the great majority—still continue to follow formulæ blindly, and obey directions implicitly, never dreaming that to vary a formula for special purposes is not to take an unwarranted liberty. They entirely ignore the fact that varying climatic conditions and temperatures require different strengths of solutions, and that in no two cities are the same conditions present as to the character of impurities in the water supply. All such differences are proper occasions for the varying of formulæ and often form the greatest possible changes in results, not otherwise understood.

By dint of repeated hammerings, it is slowly impressing itself upon the amateur photographer that inasmuch as heat accelerates the chemical action of the developing solutions, the formula may be diluted with water in hot weather with excellent results. But it is not so clear to his mind that during the winter time, when the cold causes sluggish action, that the water in the formula may be lessened to produce more rapid development.

But few, indeed, can tell, even when they pose as having studied the subject, whether it is advisable to vary the quantity of alkali in the developer rather than the quantity of water, or vice versa, forgetting that there is a decided difference in the relative strength of the different proportions of the ingredients. If a formula calls for an ounce of the active agent, or reducing



BY T. D. IEDHAM, AUCKLAND, N. Z.

REFLECTIONS

solution, and an ounce of the sodium sulphite solution and an ounce of the alkali, together with seven ounces of water, suppose we wish to make development slower on account of the warm weather. We may lessen the alkali to three-quarters of an ounce, and then the proportion of the alkali to the rest of the developer will be as three-quarters is to nine and three-quarters ($.7\frac{3}{4}\%$). But the diluting, with no diminishing of alkali by addition of say two ounces of water, will change the relative proportions of alkali and total mixture to 8.33% .

Which is preferable? Unless some very urgent reason demands it other than temperature, the diluting with water is best, because it does not change the relative proportions of the different chemical constituents. To change them is to affect in some wise the harmony of their concerted action; to reduce or increase the amount of water is merely to make faster or slower the action of the solution as a whole. But ask your amateur what to do and he will take sides one way or the other—forgetting that there is always safety in a middle course, and that a very slight reduction of the alkali in the formula and a moderate addition of water produces a nearly ideal hot-weather developer, but will possibly require two to five drops to the ounce of forty-per-cent formaldehyde to insure freedom from frilling; and a cold hypo bath is, of course, to be desired.

So with the treatment of a developer for cold weather use. It must be borne in mind that a combination of the two methods is again practicable, and if we slightly increase the alkali in the developer and somewhat decrease the amount of water, we shall find a solution which works well within our control and yields satisfactory negatives.

So it is in plate and print washing. The amateur learns from sad experience

how easily the film separates from the glass and how beautifully those "ruffled" edges of film look around the edge of a pet negative. That is easily learned; and so is the remedy—to use ice in the water and wash by hand if possible. But how many think, in the winter time, of the action of the cold water—and ugh! how cold it is sometimes—upon the film. They forget that it contracts the little cells in the gelatine and so renders the water less able to wash out the hypo. Therefore it must of necessity require either a slightly warmed water, as one may obtain by a combination bath-tub faucet by mixing a little water from the hot-pipe supply, or else a longer washing than in summer. Of these the former is the best, provided the temperature of the water at no time goes over 60° Fahr., but if there is no thermometer handy, don't chance it. Wash an hour and a half or else wash by hand, after all, the surest way to get rid of the trouble—some hypo.

So on, all other photography. instruction lae seems hered to than the Brains to grow for the use. If true, the fraterni-good pro-weak gray its general

And the splutterings and rushing about; how them? I have seen a the distance of his subject, at the proper point on the focusing scale, and afterwards get out his focusing cloth and focus the image on the ground glass by rack and pinion adjustment. Can you imagine a sillier action? I have seen a cloud picture given a long exposure with a small stop, when the treatment should have been exactly opposite, to obtain that delightful lack of detail which is one of the chief charms of cloud effects.

Now, don't for a moment think I'm one of those fellows who never make mistakes. Far from it. I make lots of them; but I try to aim at *never making the same mistake twice, on the score of ignorance*. A man may make a mistake *once* through ignorance, but if he repeats, he is to blame. I really believe every mistake I ever made the second time was because I didn't use my brains! If the coat fits me, it certainly does you in some degree.

Photography has its arbiters no less than fashionable dressmaking and



SUBSCRIBERS IN DIXIE
BY K. M. TURNER, DIXIE CAMERA CO.

through the cesses of photo- The letter of and formu- to be ad- rather spirit. are said weak want of that is amateur ty has a portion of matter in make-up.

unnecessary fussings and the many are free from man carefully estimate and then fix the indicator

tailoring. But just as well-dressed people seldom go to extremes, so sensible amateurs, who use their brains in working out photographic problems, seldom adopt the fads of the extremists.

Moderation, above everything else, is the key-note of success in photography. It is the moderate-speed plate, given a moderate exposure, and then developed to a moderate density in a moderately strong developer, which, when moderately printed and mounted, comes in for the most attention and praise from the majority of people; it is the moderate, rather than the freaky, which is lasting in art, as in all else!

There is only one excuse for extreme measures in treating a negative or print, and that is to make up for some prior operation insufficiently done or carried too far. Thus in the end the general moderate balance is attained.

So take the old chemist's suggestion home to yourself—I have done so—and remember it whenever you expose or focus or develop or print or mount. That's practically the only use of brains in a formula; like some chemicals, they "should not be mixed in until the moment of using," but then, incorporated in the formula, they work wonders in its operation. The ideal photograph is the one produced with the simplest and most natural means and with a liberal supply of brains.

To make one's failures real steps toward ultimate successes—that's what brains are for!



BY FRANK E. FOSTER

THE EVENING MEAL

UTILIZING HOME-MADE APPLIANCES AND ORDINARY ROOMS FOR DARKROOM WORK

BY FAYETTE J. CLUTE

I met a friend the other day who had "given up photography for the time being"; having moved a few months previously, he had "not yet found time to fix up a darkroom." I questioned, "A darkroom?" as if a darkroom was as unnecessary as the buffing wheel of the old-time daguerreotype. "Why!" he enquired, "don't you use a darkroom?" I told him I had not used one for the last five years, only so far as any room in the house was dark after the sun was well down.

Another friend had as an excuse for not taking his plate camera with him on his vacation, spent in one of the most picturesque spots in the northern part of the State: "There wasn't a darkroom within ten miles of the place." These and a few other occurrences have led me to believe that an article with the above title may perhaps prove of value to those who imagine that a well-equipped darkroom is necessary, if negatives are to be produced.

I wish to say right here that I am not theorizing. I have averaged fifteen 8 x 10 negatives a week for months, besides numerous spools of film and smaller plates, both for my friends and for myself; using for a darkroom either the sitting-room, the kitchen or a bedroom, whichever happened to be out of



BY A. R. GIBSON, CHICAGO

LATE SUMMER



BY DR. CHARLES H. PARKER

HIS FIRST APPEARANCE

commission at the time. I have taken a camera and a case of 8 x 10 plates into the Ozark Mountains and brought back 128 good negatives out of a possible 144, besides using a gross of 6½ x 8½ bromide paper. The only things carried in the photographic line, besides the camera, plates and paper, were a quire of orange envelope paper, a can of paraffine paint, an ounce of amidol, one of pyro, some sulphite of soda, washing soda, hypo and bromide of potassium. Not even scales or graduates were thought necessary. The only thing I forgot and really wanted was a brush to use with my paraffine paint. When I explain that the summer residence that I occupied was made of unhewn logs, unchinked, you may know that a perfect darkroom is not absolutely essential.

To begin with, I would advise every one to learn the simple trick of filling their plate-holders in darkness. After it has been done a few times, the need of a light is not felt; in fact, were it at hand, one would hardly take the trouble to light the ruby lamp after the habit of doing without has been acquired. The slides should all be placed right side up at the right hand, the empty holders to the left, and the box of plates in front. The light is then turned out and the holders filled. Should the holder contain exposed plates, they are removed in the dark, the plates being returned to an empty plate-box, face to face, as originally packed. The light is then turned on to allow the slides to be arranged, again turned off, and the holders filled as before. Should moon-light or light from the street stream in around the curtain too strongly, I throw my coat over the back of a chair and place it before me as I sit with the box of plates on my knees.

Should you find it necessary to use a darkroom during the day, make a cloth cover to go over the window of some convenient room. Make it out of two thicknesses of cloth, one black and the other red. Make it a good fit, and make it lid-shaped at the edges, inserting pieces of elastic along a portion of each side. Placed over the window it will grip the frame and make the window entirely light-tight. The addition of a few small nails or screw-eyes to engage the edge will minimize the danger of its slipping off.

When you come to develop your plates or films, the first thing required is a ruby lamp. While not claiming that a wooden box containing a candle, with a piece of orange paper pasted over one side, is the best form of lamp, I do claim that it is an improvement on the majority of the cheap lamps sold. A good candle is to be preferred to a poor oil lamp, as it does not give off the same bad odor and is much more cleanly. The objection generally made to candles is that they are liable to burn out at the wrong time. Let them burn out. I have often placed my tray containing partially developed plates in the shade of a pile of books, or on a chair pushed under the table; opened the door of my lamp and inserted and lit a fresh candle without fear of damaging the plate. The box should have holes bored near the top and bottom to allow air to enter and pass out. These openings should be at the top and covered inside with a flap of black paper, bent so as not to lie close, yet preventing direct rays from passing out. The front or opening through which the light is to fall on the tray should be covered with a piece of glass placed over it, and then a piece of ruby paper, a little larger, pasted at the edges, placed over it and pasted down. All cracks and holes in the box should be covered with strips of the black paper in which plates are wrapped.

Trays that I prefer, on account of their shape, to the best hard rubber article, I make by taking a board a little wider than one, and longer than three, of the plates I am using, and tacking a strip of thin wood all around the edge to form a rim. Strips of stout paper or cloth are glued around the corners and outer edge of this tray, a deep groove cut along the center of the bottom, to allow of the plates being picked up, and the whole then given a coat of paraffine paint, inside and out. One can develop three plates at a time just as easily as they can sit waiting for a single plate to respond to the rocking of the tray. A lead pencil placed under the center of this three-plate tray allows of its being rocked very nicely, a wave of developer gently flowing from end to end. Another advantage of the long tray is, that you can hold a plate over it for examination without fear of the dripping not falling back into it.

A graduate is another piece of unnecessary apparatus. I discarded mine for the reason that, working as I sometimes do over a carpet that is a little too light-colored to stand big splotches of pyro stains, I was in constant dread of knocking it over. It is a very simple matter to graduate the side of a bottle either with lines made with the paraffine paint or scratches from a file. Both my A and B solutions are in bottles so graduated in ounces up to sixteen. An ounce is easily poured from each bottle into a granite-ware cup, that hangs, when not in use, on a nail in the side of the box I use for a lamp. I know just how full I must make this cup, when adding water, to give me a normal developer. The two bottles stand, one on each side and close to the lamp, with their corks in, so that there is little danger of their contents being spilled.

A great convenience in developing away from a regularly equipped dark-room is an upright fixing tank. You can make one if at all handy with tools;



BY DR. F. DETLEFSEN

CHILD STUDY

but if not, a carpenter will make one for a few cents. It is merely a box a little deeper than one side of the plate, as long as the other, and as wide as desired. Grooves, to run up and down, must be cut in the inner side of the two end pieces, before the tank is nailed together, to engage the ends of the plates and keep them from touching each other. A strip of thin wood should be nailed across the bottom of the tank, to keep the lower edge of the plates from sinking into the sediment that will collect there. If an ounce of bisulphite of soda is added to every pint of a regular one-in-four solution of hypo, the bath will stay clear and do its work for about a year. This tank sits on the table beside my lamp, with a tray of water for rinsing the plates in front of it. There is then no need of contaminating the hands with the fixing bath until developing is completed. With a pitcher of water on the floor at one end of the table and a slop-bucket on the other, there is no more need of a sink and running water than there is of a fire-plug and six-inch hose.



BY DR. B. F. NOYES

PORTRAIT OF BOY

Reason it out. Suppose you use a sink with running water, how often do you use the tap? The water you draw off to mix fresh developer with is just as easily poured from a pitcher, and the rinse before fixing is just as well given to the plate by placing it in a tray of water, as it is by letting water from the tap splash all over. One should be just as capable, if not more so, of doing their developing without spilling solutions on the table or floor, as they are of washing their hands and face without splashing water over the four walls of the room. Of course, running water is handy when it comes to washing the plates. My fixing tank is carried bodily into the bathroom and the plates placed on a board with a rim of wood tacked on each side. A string at one end goes over the tap, holding the board at an incline. The negatives are washed very thoroughly in a short time. Pins driven into the board at intervals prevent the plates from sliding over each other should the force of the water lift them from the board a trifle.

A row of nails driven into a wall, in pairs, forms a better drying rack than

the regular article sold for the purpose. The corner of the plate is placed between two nails forming a pair, supporting it cornerwise, of course, but flat with the wall, allowing a free access of air to the film, which is not obtained in the ordinary drying rack. The distance between the nails forming a pair, as well as that between the pairs, is governed by the size of the plates.

It is advisable that a cover be made for the fixing tank to keep out dust. A cover for the developing tray is also a convenience. With these two covers at hand, one can leave the room or use a white light at any time desired during the operation of developing. When done, the bottles containing the developer and restrainer are laid on their side in the empty tray, the cover put on and all packs neatly away. My own outfit goes into a washstand drawer. With the most ordinary care, developing can be so carried on as to avoid soiling the table-cover or carpet in the least. A piece of oilcloth may be placed over the original spread, and as an extra precaution, a piece of thick cloth over all. There is then no excuse for damage of any kind.

Moonlight, or light from ordinary street lamps, coming in in small streams around the curtain, will do no harm unless allowed to fall directly on the plate.

REV. F. C. LAMBERT'S TABLE OF PINHOLE EXPOSURES EQUIVALENT TO ONE SECOND WITH LENS AT F/32

Distance of Hole from Plate (in inches)	Diameter of Hole (in inches)			
	$\frac{1}{50}$	$\frac{1}{44}$	$\frac{1}{35}$	$\frac{1}{25}$
5	min. 1	sec. 45 min.	sec. 30	sec. 15
6	$1\frac{1}{2}^*$	1	44 min.	22
7	2	$1\frac{1}{2}$	1	30
8	$2\frac{1}{4}$	$1\frac{7}{8}$	$1\frac{1}{4}$	38 min.
10	4	3*	2	1
12	6	$4\frac{1}{2}$	3*	$1\frac{1}{2}$
14	8	6	4	2
16	10	$7\frac{1}{2}$	5	$2\frac{1}{2}$
18	—	9	6	3
20	—	—	8	4
24	—	—	12	6*
28	—	—	16	8
32	—	—	20	10
36	—	—	24	12

*Shows the region of best definition

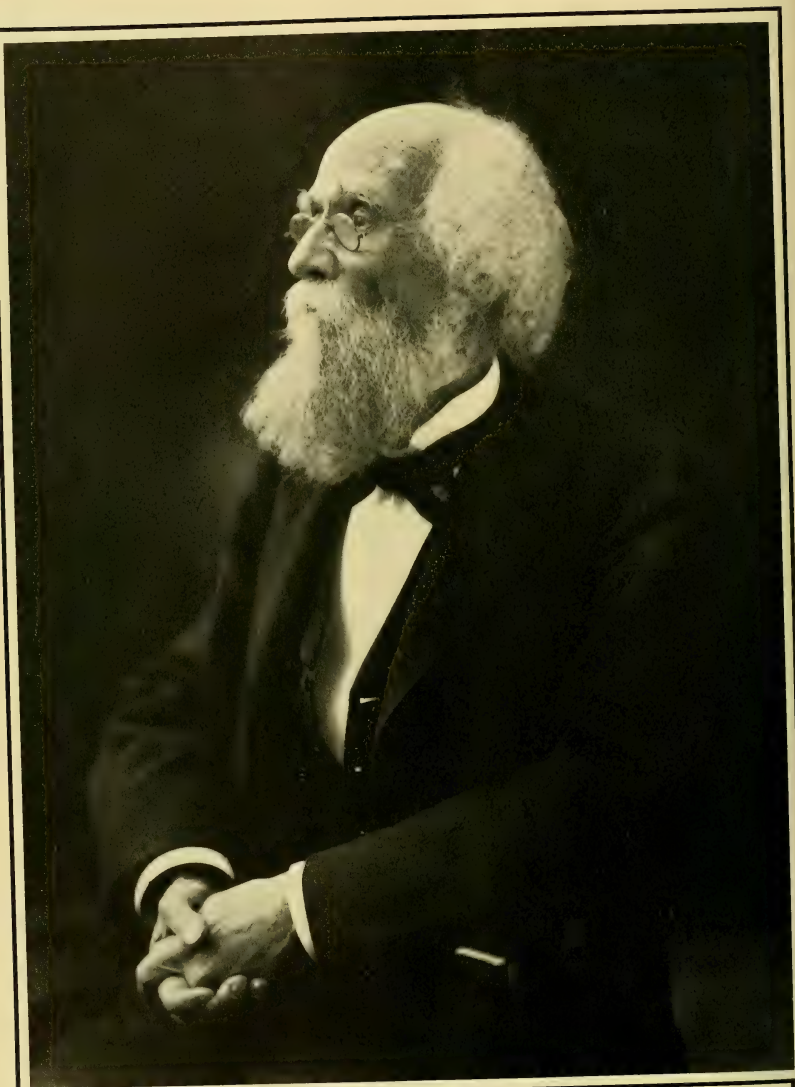


BY P. DUBRUEIL

THE BOATMEN

WORK OF FOREIGN PHOTOGRAPHERS

This month CAMERA CRAFT reproduces a picture of the French photographer P. Dubrueil, of Lille. The fact brings prominently to my mind how much we miss by not more frequently reproducing the work of continental Europe in our magazines. The French and German periodicals, especially the latter, have largely reproduced our work, and devoted their pages to an appreciative criticism of our efforts, whereas the mass of American readers are left in ignorance of the work done on the continent of Europe. The English school we have been made acquainted with. Craig Annan, Horsley Hinton, and the late P. Robinson are more or less familiar to us; but what do we know of the splendid portrait studies of the brothers Hoffmeister, of Hamburg, and their equally powerful landscape work. Not less powerful in some ways is the work of their fellow-townsmen, R. Durhkoop, a number of whose studies were published in the May number of the *Photographische Mitteilungen*. We ought to know something, too, of Naundorff, of Berlin, and Erfurth, of Dresden. Among the lady workers, the pictures of Frau Herting, of Charlottenburg, ought to be known to us. Count von Gleichen, not long ago, produced a picture that, as a classical study of the nude, excels anything I have seen in photography. Funke, of Flensburg, has done good work; and Schmidt Diehler, of Frankfort, has given us beautiful studies of South German landscape and life. Nor should Holland be forgotten; she has an artist in J. Huysser, of Bloemendaal. We know a little of French work. Demachy, Puyo and Begue have been often reproduced in America. In Dubrueil we have a different type, somber, introspective, delighting in twilights and the mystery of evening, but withal essentially French in strength of subject, force of execution, and that classic grace which is rarely entirely absent from French art.



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PROFESSOR JOSEPH LECONTE

DIED IN THE YOSEMITE VALLEY, CALIFORNIA, JULY 6, 1901

"PROFESSOR JOE"

BY O. V. LANGE

So we all called him. Few, indeed, who, by sterling worth and kindness of nature, earn the love and reverence of a student body so completely as to warrant the use of so homely a title. But Professor Joseph LeConte was a man filled with the spirit of good fellowship, a veritable child of nature, loving all things with a love as boundless as the affection lavished upon him by the men and women of the university. Now that he has gone, those of us who knew him cannot but cherish the memory of the incidents which occurred during the last few years of his service to and for us.

It is the custom of the senior students of the university to make an annual pilgrimage to the different buildings on the campus in the forenoon of "class day." One of the students is selected to make a speech from the steps. The first building to be visited is usually old South Hall. In this building "Professor Joe" had his study and lecture-room.

A great throng had collected and the appointed speaker was about to begin, when a spontaneous shout went up, "We want Professor Joe!" "We want Professor Joe!"

Never in the history of the university was there such enthusiasm.

"Professor Joe," deep in preparation of a new volume to be published, heard a great buzzing noise outside but paid little attention to it. When he did not come forth, a committee was sent to invite him to make an address to the students. As soon as he appeared there was absolute stillness; his kindly words and a benediction were what the graduating class wanted, and they were satisfied.

Another impressive occasion occurred some years after. It was also on class day, the scene being in a eucalyptus grove back of the chemistry building, called "Ben Weed's Amphitheater." Here the junior class has a spectacular exhibition interspersed with college jokes and witticisms. On this occasion between four and five thousand people congregated in the amphitheater. The invited friends of the students, as on all such occasions, kept up a continuous conversation, each one interested in his or her neighbor. All at once there appeared in the arena before the vast concourse a white-haired, kindly-faced old man, slightly bent by the weight of years, escorted to his seat by two tall, athletic looking young men.

Almost instantly the distinguished guest was recognized, heads were uncovered, and a mighty shout went up, swallowed immediately by the college yell shouted by thousands of lusty lungs. Before the arrival of "Professor Joe" professors, regents, and even benefactors of the university had arrived and taken their seats, and were saluted by those only in their immediate vicinity.

Circumstance, place and conditions had but little to do in awakening enthusiasm when "Professor Joe" appeared in the midst of his boys and girls.

I remember giving an illustrated stereopticon lecture on the University of California at Shattuck Hall in Berkeley some years ago. There were about one hundred slides exhibited, among them being one from a negative taken the day before by a student. It was a very good picture of "Professor Joe"

standing in his lecture-room at his desk which was glistening with cut glass, silver and burnished trinkets, and almost completely covered with a mass of roses and smilax given by the students to commemorate the seventy-fifth birthday of their beloved instructor. He was standing in a characteristic attitude often assumed when lecturing; both hands far apart on the desk, body inclined slightly forward and facing the class. When the slide was thrown upon the screen, I was startled for a moment. A mighty shout of joyful recognition from hundreds of throats came so sudden that I was bewildered. It was at least five minutes before the tumult ceased.

Such are a few of the incidents that it has been my good fortune to witness. Others who have known and loved him could add many more.

Professor T. R. Bacon, in an address before the summer school students, said: "That good, gray head to all men was a luminary that seemed touched and transformed. Why he inspired such affection by mere sight of him is easy to understand; his great intellect had for a background a simple soul like that of a child."



BY FRANK SNYDER

SAD MEMORIES

THE ELEMENTS OF PHOTOGRAPHIC EXPOSURE

BY F. M. STEADMAN

IN THREE PAPERS—SECOND PAPER

A piece of sensitive paper does not and cannot measure the value of a source of light, even with practical accuracy, unless that light be very condensed as to the "space" it occupies. A simple experiment will show the wonderful change in the light intensities and in the complete scale of contrasts on an object *in the same light* as it is influenced by the point of view. Stand against the inside casing of a window and turn toward the opposite casing, at the same time slightly inclining the head. Do not look for any special style of lighting, as it is not necessary in the experiment.

In the hand from the window hold a small hand-mirror and look at your face in it, turning it toward and away from the window as far as the arm can swing and the eyes follow without moving the head. Note how low the color of the face is when the hand holding the mirror is toward the light, and how the high-light is raised and the contrast is increased when the mirror is brought into the room. Examine mainly the nose and all the front of the face, as those parts are always visible as the mirror is moved from side to side.

Other objects may be examined instead of the face by sliding a table up to the window and placing upon it, in front of one casing, at a distance equal to the width of the window, articles of various forms, colors and of surfaces, as to smoothness and polish. Include a teacup and a rough stone. Have a cardboard or large book in hand with which to shield the eyes from the window itself, and examine these articles from every accessible point. This experimenting will prove conclusively that when one has measured as near as possible with an exposure-meter the intensity of the light that falls on an object, the real analysis of the scale of contrasts is only just begun. When an average object is placed as indicated above and analyzed from a point near the window, the scale of contrasts is nearly normal.

This truth is what induced James Inglis, in his "Artistic Lighting," to say that a photographer should burn his backgrounds. When this *same object in the very same light* is viewed from a point in the room opposite the window, the scale of contrasts becomes too violent to be photographable. Both conditions are made by the same laws, but photography is only a process, remember, and is limited in what it can do. We use it to create a scale of translucencies on a shield, which, when a piece of sensitive paper is exposed to the sun through it, will keep certain parts of the paper almost to its original color, while other parts are fading to a black that we choose to use for our shadows. Now if this contrast on the subject is greater than photography can reproduce in the negative, normally and easily, it is our business to know it and, by the knowledge of the same law that made it so, modify it to the scale of contrasts that we know to be normal.

This, in practice, Mr. Inglis knew very well to be true, as in the chapter on Rembrandt lighting he says that it may be advisable to soften the direct light from the top, and also to increase the brightness of the shady side of the face by reflection.

Now, in order to prove that a piece of flat paper cannot measure the

intensity of a broadly expanded light, one may make a simple experiment with solio. Stand on the inside of a door or window through which the sun is shining. Wrap a piece of the paper around a finger, or better, around something of larger size, as a round bottle or ball, and expose it to the rays of the sun for thirty or forty seconds. Now lay it out flat, and notice that the sun tinted it most at the point exactly facing it and less at the sides, which were at an angle to it. Remember the objects examined by the window, and note that those surfaces that gave the brightest intensity to the eyes by reflection showed the least tinting by absorption, which proves that the laws of absorption and reflection are exactly opposite in their working, and that they cannot be measured by a piece of sensitive paper.

We see, then, that a flat sensitive surface measures part of a broad light by the absorption of those rays which strike it at, and near to, a right angle, but indicates almost nothing of the values of the outer margins of that light nor of the changes produced by reflection as determined by the point of view, and nothing whatever of the varying actinic value of surfaces in the same light and point of view as influenced by the different colors of surfaces in nature.

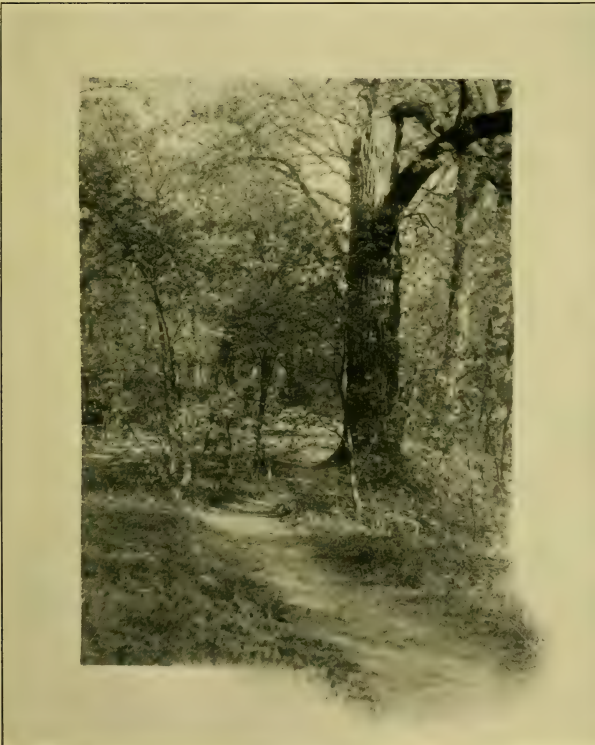
There is another element of exposure that a meter cannot measure, and which the literature on the subject hardly mentions, but which is, however, of great importance. This is the greater or less amount of internal bellows illumination as caused by the area of those parts of the image on the plate which are of great intensity. Other things being equal, a plate on which was focused a very small image of a sun-lighted white house, backed by a tall, dense grove, would have a less intense illumination on those points constituting that image than if the camera were brought close and the image of the house made to nearly cover the plate. The difference would be the greater internal illumination caused by the larger image, which light, being thrown back from the bellows to the plate, not only raised the intensity of the points but tends to reduce the contrast of the intensities of the image by illuminating equally all of its points. For this reason a small bit of an intensely lighted landscape or marine could be given a longer exposure if photographed through a window with the camera against the opposite wall, than it could if the camera was directly in the window or out of doors. This is the main reason why it is so easy to over-expose a birdseye view or marine view having very little shadow.

To get a vivid mental impression of this law as it influences the eye and plate, stand a step or two inside of a window and in front of one casing. Look at the casing with one eye and gradually pass a cord in front of the eye shutting out the light of the window. As soon as the light is all shut out of the eye it can distinguish the color and texture of the casing, wall, etc., which when the light shines directly in the eye can hardly be seen.

This is occasioned by the image of the window on the retina throwing light promiscuously around inside of the eye, and in this case the reflected light from the window image in the eye is so much brighter than the focused image of the casing that the latter is practically annihilated. Under such conditions a clear picture of the wall and casing could not be procured by any kind of exposure or manipulation, nor by any kind of the so-called "non-halation" plates on the market.

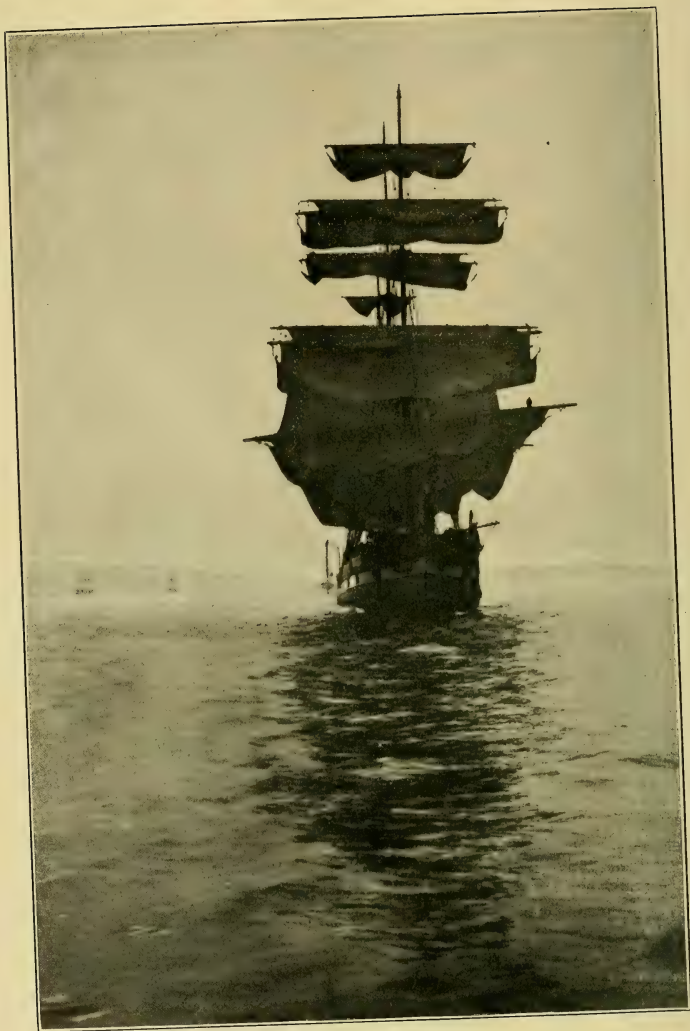
The strength of contrast of an optically focused image *must* be reduced more and more as it is equally illuminated in all parts by diffused light. Another source of bellows illumination, even more active than that mentioned, is that part of the image that enters the lens at such an angle as to strike the bellows folds instead of the plate, and which is reflected to the plate more or less evenly. With a lens having an extended circle of illumination and a subject that is bounded on its sides by strong illuminations, this light in the bellows will fog a plate with all certainty, especially if it be very slightly over-timed. However, this is a condition that must be considered only for the purpose of avoiding. It has to do, not with the time of exposure, but with the conditions under which the exposure may be properly made.

A piece of sensitive paper so shielded as to admit light from an exact fractional part of all space would be a scientific key to the light condition by giving its "unit-value," while the number of "space-units" or the "space-size" of that light is a problem in the measurement of space. This is the law of all illuminants, whether they furnish light directly or by reflection.



BY C. F. SRYDER

A BREATH OF AUTUMN



BY GEORGE W. REED

ON QUIET SEAS



BY T. C. SCHWERIN

"DON'T BOTHER US"

OLD PRINTS ON THE CAMERA CLUB WALLS

BY W. B. WEBSTER

The old-time members of the California Camera Club were quite forcibly reminded of the rapid flight of time when the Print Committee began to rearrange the old pictures upon the walls of the clubroom recently. Many of these pictures had hung for years in their position. Gradually members became accustomed to them and they attracted little, if any, attention; but when the committee rearranged the pictures, dusted them and hung them in the proper light, they took on new beauty, and ever since the first of the year have attracted and held the attention of visitors.

Many are the comparisons between the examples of the old photographs and those of the new. In spite of the great advance made in technical equipment and photographic material generally during recent years, there has not been a corresponding improvement to be expected in the work, as turned out by the amateurs of today. Such is the general opinion of the old-timers.

Going back to the work of nine or ten years ago, you will find on the club walls two splendid animal studies, the work of Mr. Gambier Bolton, of England. Mr. Bolton's animal pictures are known throughout the world, and few, if any, photographers have had the experience that he has in this class of work. One of the pictures is a study of a head of Old Ben Butler, at one time chief of the buffalo herd in Golden Gate Park; the other is a remarkably strong study of an elk, full of the spirit of wildness found only in the West. Both of these



BY GAMBIER BOLTON, E. Z. S.

OLD BEN

prints are in soft sepia tones, and have lost none of their richness of color and softness of detail. The pictures were made by Mr. Bolton during a visit to the Coast some years ago, and were presented to the club by him in return for courtesies extended.

Another old picture that is attracting much attention is an enlargement by Mr. T. C. Schwerin, it being an unusually clever treatment of a difficult subject. The arrangement of the background in this picture is excellent, and the composition is such that it has had few equals since its production.

Geo. W. Reed's "Quiet Waters" is a picture that never fails to attract the visitor's eye. The bold outlines of the ship and the queer old-fashioned frame seem to fit together as no other picture on the club walls.

There are other old pictures of equal merit in the clubrooms, and their resurrection has done much during the past few weeks to furnish food for discussion.



BY GAMBIER BOLTON, E. Z. S.

ELK

TONING BROMIDE PRINTS

SIMPLE WRINKLES THAT ENTER LARGELY INTO THE SUCCESS OF THE BEGINNER

By F. E. MONTEVERDE

Photographic enlargement has now attained such popularity both in the ranks of professional and amateur workers that any hints or suggestions that will help the latter, at least, can but prove acceptable. It is the intention of this article to give in a few lines the experience of one who has been through the mill; has met the usual first setbacks to the delver in the advanced manipulations of photography, and has happily emerged after many failures with the experience that is always "bought and not inherited." Still it is the hope of the writer that to those ambitious amateurs struggling to attain perfection in this, one of the most interesting of photographic manipulations, that the application of these few hints will help them to sooner attain the goal of success, saving themselves much time, worry and expense.

It is here assumed that the reader has mastered the necessary steps in the production of a creditable enlargement, for it is only the toning of the prints that I wish to make clear to the worker. It may not be amiss, however, to give a few hints as to the developer used in producing the print; it will also be understood that the brand of paper that this article refers to, is that shown to the trade as Royal bromide—truly a royal paper giving regal effects—but oh! shades of departed kings!—it can also be made to give nightmares. In the formulæ suggested by the manufacturers that for amidol is the simplest and gives most satisfactory results. The blacks are of a beautiful velvety texture, and the intermediate shades partake of a blue-black tone, its only objection being that it stains the fingers, but with rubber cots this can be avoided. For those not having this formula I give it here. The ingredients are to be dissolved as enumerated:

Water.....	10	ounces
Sodium sulphite, crystals	$\frac{1}{2}$	ounce
Amidol.....	40	grains
Solution bromide of potassium, 10%.....	10	drops

This developer will not keep, therefore it must always be made fresh, and should be discarded as soon as it turns dark, being liable to stain the prints. It is poor economy to use a developer until it does.

Another developer I have found to give beautiful effects on bromide paper, especially when developing for toning the print, is tolidol. It has also the advantages over amidol, in that gives more latitude, both in the exposure of the print and in its development, advantages of the utmost value when manipulating large prints. It will not stain the fingers, keeps well and the old developer, if not too far exhausted, can be used for developing hard or over exposed dry plates or films.

Tolidol gives rich, warm blacks which are the most suitable for after-toning, giving exceptionally brilliant shades of brown, from warm black to the coldest sepia. The best formula for this developer is somewhat complex, but once prepared it is easy to handle, especially as it keeps well if the bottles are kept in the darkroom.

A.

Tolidol.....	60	grains
Water (distilled).....	4	ounces
Sodium sulphite, crystals.....	$\frac{1}{4}$	ounce

B.

Sodium sulphite, crystals.....	$\frac{1}{2}$	ounce
Water (distilled).....	4	ounces

C.

Sodium carbonate, dry.....	$\frac{1}{2}$	ounce
Water (distilled).....	4	ounces

For use, take A, 2 parts; B, $1\frac{1}{2}$ parts; C, 2 parts; water, $6\frac{1}{2}$ parts, and add 10% bromide of potassium solution in the proportion of 2 drops to every 3 ounces of developer.

Having made the enlargement, that is, having developed, fixed and washed the print for, say, ten to fifteen minutes in running water, or in four to five changes, it is ready to immerse in the cold-toning solution, which should never be less than one to two inches deep in the tray. The print or prints should be handled constantly for the first four or five hours. The exact manner of handling the prints is fully set forth in the pamphlet sent out by the manufacturers of the paper, and close adherence to directions will insure success. For the formula and manner of making the cold-toning solution I cannot do better than refer the reader to the same publication, for up to the point of making the solution and immersing the prints in it all is plain sailing. It is from here on that failure usually comes to the inexperienced worker. He finds that his prints, in the summer, tone in an incredibly short space of time (the usual time is from eighteen to twenty-four hours). His tones, where the prints have not entirely bleached out, will be of a most striking yellow-brown shade, very much like, and undoubtedly as much appreciated at the moment as the color of the proverbial yellow dog. Again, in the winter months his prints will not tone at all. He will leave them in the solution for days; aye, for a week have I known them to stay there, and at the end of that time come out as innocent of tone as when first put in.

It is just these obstacles which, meeting the ambitious worker at the very threshold of the process so enthusiastically taken up, tend to discourage and cause him to abandon what in time would prove more interesting and entertaining than the mere production of the negative; and it is just to help him over these difficulties that this article has been written. The causes for his failures are simple and evident, but he does not know it then, and has, consequently, plunged into them without the experience that comes later or not at all.

In the summer months toning is most successful, temperature having a great deal to do in accelerating the chemical action of the process. On the other hand, the cold of winter retards, and even paralyzes, the action of the solution, making it, to a great extent, non-active. But the principal cause of failure consists in using a freshly made or raw solution, *i. e.*, a solution that is unripe; for, like wine, the toning solution improves with age, and the older it gets the better it is, for it is with an old, aged and ripened solution that the richest, warmest and most brilliant tones are obtained. So, if you have no old solution you must simply put off your toning until you have. Toning should

not be attempted, if one desires the best results, with a solution that is not at least a week old, and the older the better.

I have two gallons of toning solution, the original base of which was made over two years ago. As it has been evaporated and absorbed by the paper, I have replaced it by new stock, but always in such a small percentage to the whole that it has only helped to give it new vigor and activity without impairing its value. Such a "mother solution" is worth waiting for. Prints immersed in it will not bleach, the ripening softening the harsh effects of the hypo, which, when raw and fresh, so quickly attacks the silver of the print that its dissolving action is greater than its toning quality.

Given the old and ripened solution, in the warm atmosphere of the work-room in summer, say between 70° and 80° , the process will reach its climax in from eighteen to twenty-two hours. After this time the toning action ceases and bleaching commences, but so slowly that it can be controlled and stopped, when the desired shade of brown is reached, by plunging the prints into running wash water. They should remain at least two hours in the wash water.

In winter we must, to obtain equal results, have the temperature about the same. This can be readily accomplished by artificial means. My darkroom is quite large and with the use of a small gas stove I have no difficulty in obtaining any even temperature. I keep the door partially closed, but not sufficient to prevent a good circulation throughout the room to carry off the gas fumes from the stove. With the temperature about stationary at the required degree, the toning takes places just as it does in the summer time. Another way is to place the toning tray in the kitchen after the supper hour, keeping up a banked fire in the stove during the night. In this way a great deal of time is thereby gained. However, the tray must be protected from any soot or dust that might otherwise fall upon it while in the kitchen.

The reader will now see that the two requisites for the successful toning of royal bromide are, that the solution be ripe and aged, and that the temperature of the room in which the process is carried on be less than 70° Fahrenheit. Amateurs and many professionals still adhere to the old and dangerous way of drying their prints, by hanging them with hooks over a line; dangerous, in that large prints, of their own weight, tear off at the corners, perhaps spoiling the print or necessitating trimming down beyond what was originally desired. Unsatisfactory in that the print does not dry spontaneously but dries first at its upper edge, the water gradually dripping down, thus keeping the lower edge wet much longer than the upper, causing it to kink and curl.

Prints, no matter how small, should never be hung to dry, but should be laid flat directly from the wash tank upon and between sheets of lintless blotting paper, the best grades of which can be obtained at the dealers in photographic materials. In the blotters they should be gently squeegeed with the roller and placed face down upon other dry blotters and left to dry, all of which takes less time than hanging them up, and is so much superior in every way that once tried you will never have any more use for your hooks, except to hang up the damp blotters to dry.

Never allow yourself to hurry through your work. You must be thorough if you expect to produce absolutely permanent work.

BY THEO. S. SOLOMONS

THE RITTER GROUP IN THE HIGH SIERRAS

COURTESY SUNSET MAGAZINE

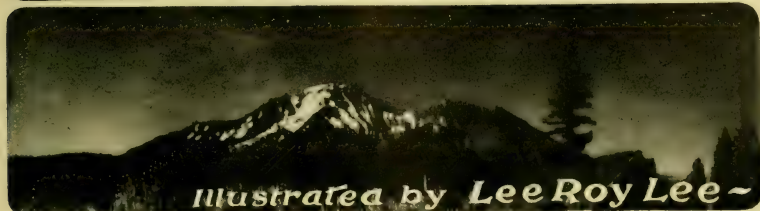




BY LEE ROY LEE

SHASTA FROM STEWART LAKE

Summer at Shasta.



BY FAYETTE J. CLUTE

As a paradise for the photographer, the foothills of Shasta and the Siskiyou Mountains have no equal. Sisson's is, perhaps, the most advantageous rendezvous from which to visit the famous points of scenic interest about Mt. Shasta and the Sacramento Canyon. Here Shasta looms up grand and sublime, the Strawberry Valley quiet and serene. The new tavern is all that heart can desire in the way of a hostelry, and the same old-time hospitality that made the original Sisson's Tavern famous, still prevails. From here, no doubt, the best trail leading to the summit of Mt. Shasta has its beginning. Starting at noon, the timber line at an elevation of 8000 feet is easily reached by nightfall. The other 6442 feet of elevation is a more serious matter. The photographic tourist will undoubtedly satisfy himself with the grandeur nearer at hand, leaving this work to the enthusiast in mountain climbing, although the ascent is neither dangerous nor excessively trying except to those with weak lungs.

Two miles above Sisson's, at Upton, the McCloud River Railroad connects with the Shasta Route; winding around the foothills it gradually works its way up the steep inclines until it reaches an altitude of nearly 5000 feet. On the eastern slope the descent is more precipitous, being accomplished by means of two imposing triumphs of engineering skill in the way of monster "switch-back" curves. Ascending the ever-changing view is one to charm the eye, each succeeding mile presenting an ever-varying panorama. The descent into the valley of the McCloud is even more inspiring. Vistas of imposing mountains clothed in magnificent conifers greet the eye, while below the beautiful forest-clad valley of the McCloud lies like a carpet of green. McCloud, the terminus of the road, is a model lumber camp; sewerred, and lighted by electricity, employing during the lumber season nearly 1000 men.

From the earliest days the head waters of this beautiful river have been accorded the elysium of the fisherman. Her cool and sparkling waters have charmed the disciples of Izaak Walton as has no other of the resorts for which the northern counties of the State are famous. Here the greater portion of the volume of water that forms this tumbling, foaming mass gushes suddenly forth from the face of a solid lava formation, in a roaring sheet of water seventy-five yards wide. Below, the three falls, their rugged beauty almost indescribable, lie within a mile or two of each other. At any point in the entire ninety miles of her length, the stony canyons, rocky ravines, abrupt bluffs and wooded



BY LEE ROY LEE

SHASTA FROM CASTLE LAKE

valleys that form her bed, so combine to please the eye that Nature, in all her picturesqueness, seems to have outdone herself.

At Mt. Shasta Camp, a village of some size, composed of cottages of substantial build instead of the tents that the name suggests, Mt. Shasta is seen at its best. The village stands on a high plateau at the upper end of the Strawberry Valley, only a short distance from the celebrated Muir's Peak, or Black Buttes. To the west are the Scott Mountains, rising to the height of 9000 feet. From the main peak of this range three rivers—Shasta, Scott and Trinity—take their rise. To the southwest the towering, pinnaced heights of Castle Craggs loom up above the magnificent pine forests that enshroud their base.

The entire Canyon of the Sacramento is one continuous intoxicating dream of beauty. The Shasta region, with all its wild picturesqueness, is all around. Canyons carved by the glaciers of a former period are at hand. Granite spires lift their majestic heads at one point; basalt cliffs rise in terraced heights at another. Silent lakes lie to the north; sounding waterfalls make music in the canyons below. Beds of lava and caves of ice are next-door neighbors in this wonderland of nature. Cliffs, whose beetling brows frown back upon the pine-clad palisades directly opposite, lend majestic, awe-inspiring qualities to scenery that knows no equal for grandeur, sublimity and variety.

Seventy miles above Sisson's, near the border line between California and Oregon, are situated the celebrated Klamath Hot Springs. Here are located the famous Klamath Mud Baths, where the Indians were wont to rendezvous from the entire northern territory, to secure the benefits of their highly medicinal properties in the alleviation of their various ills. Here mountain peaks,

snow-capped and majestic, rising above their less lofty neighbors, clad in green, form a vista at once restful and magnificent.

On the summit and just across the line in Oregon, twenty miles above Klamath Springs, is situated Siskiyou. Located on a level plain that overlooks the country in every direction, one easily reads the application of the Indian name for council grounds which it bears. Here the powerful Shasta and Klamath tribes exchanged their friendly offices with each other, and with their more warlike brethren of the Rogue River country when at peace. Just at the foot of the range lies Ashland, the principal settlement in the Rogue River Valley. Near here Pilot Rock, the most southern pinnacle of the Cascade Range, rises a rugged almost solitary shaft of over 6000 feet elevation.

Want of space does not permit of doing homage to all the points of interest along this "Shasta Route" through the Shasta country. A much more facile pen than mine could hardly do justice to the beauty, the sublimity and the grandeur of it all. Unlike some other beauty-spots of the wondrous West, its "season" is not limited to a few short months. With the exception of the few later points mentioned, the "season" is practically continuous — a few weeks' snowing bringing crowds from the less-favored cities lying to the south, to enjoy the exhilaration of the sleighing amidst the grandeur of the scenery, made still grander by the mantle of snow that covers all. The photographically-inclined tourist, particularly if he be one of those whose vacation has been delayed, should visit Shasta if only for a week, and feel that in his case at least the delay was far from being a disadvantage.



BY LEE ROY LEE

SHASTA FROM SUMMIT LAKE

CAMERA CRAFT

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VOL. III

SAN FRANCISCO, CALIFORNIA, AUGUST, 1901

No. 4

Intelligent observation has been responsible for many a prize-winner.

PICTURES comes the announcement that portraits have been flashed across
THROUGH space without the aid of any connecting medium. The experi-
SPACE ments leading up to this remarkable result were conducted by the
New York *Herald*, the first of the newspapers to realize the value
of Signor Marconi's system of wireless telegraphy.

About two years ago the *Herald* brought to the attention of the world an instrument invented by E. A. Hummell, of St. Paul, by means of which pictures were transmitted by the regular telegraphic wire circuit. Since then the telediagraph, as it was called by the inventor, has been practically employed in the transmission of pictures of general news interest from one city to another.

Then come wireless telegraphy and the rapid strides in its development, culminating in wireless reports of the international yacht races, by means of which the *Herald* unmercifully scooped the other New York papers.

It was by an ingenious combination of the possibilities of wireless telegraphy with those of the Hummell telediagraph that resulted in the successful experiments recently conducted. The difficulties to be overcome in perfecting a practical system by which pictures can be sent through the air at a distance sufficient to warrant the trouble and expense incurred are enormous. However, it is the delight of latter-day scientists and inventors to overcome insurmountable difficulties, and within the next few years we may expect to see in the morning papers photographs of events which transpired across the continent the day before—pictures transmitted without the aid of wires.

The St. Louis "Post-Dispatch" of July 21st, announces that the Seed, Cramer and Hammer Dry Plate Companies, of that city, have consolidated under the leadership of Mr. George Eastman, of the Eastman Kodak Co., and Mr. Chas. Abbot, of the Aristo Manufacturing Co., of Jamestown, N. Y.

Should this deal go through, it would practically control the dry plate output of the world. The proposed capital of the great company will be about \$30,000,000. In spite of the tremendous sum named, and the prestige belonging to the firms interested, it will hardly be possible for the new trust to absorb the eight or ten smaller

companies that have established a reputation of their own, and always found a ready market for their plates.

THE SULTAN'S CAMERAS The English photographic press is actively roasting the Sultan of Morocco for indulging in what is termed "a piece of senseless extravagance." It seems that his Majesty, somewhat after the fashion of effete monarchs of the East, wished to buy two cameras finished in a style befitting his position in life. The order was placed with an English manufacturer through some oversight on the part of the American trade agents, and, if we believe our English contemporaries, the cameras are truly things of beauty and a joy forever. One of them is finished in "hall marked 18-carat gold," while the other is constructed principally of "hall marked silver." The cost of these barbaric instruments is stated to be \$15,000. After entering fully into a description of the instruments, *Photography* says:

We do not propose to give the maker who has had this melancholy form of notoriety further advertisement by mentioning his name, but we will do him the justice of admitting that not all of his cameras by any means are specimens of such monumental folly. This kind of display is to be condemned on every count. It is anything but productive outlay. Even the belief that it finds work for the workingman is tempered by the reflection that the same amount of money expended in other directions would find continuous rather than temporary work. No one condemns a reasonable amount of state and sumptuary in a monarch, but the good that might be done in Morocco by money wasted in this and similar ways renders its reasonableness somewhat of an open question. When one thinks of the destination of these instruments, the chances that a good picture will ever be obtained with their use, in spite of their enormous cost, seem very remote.

The Honolulu "Commercial Advertiser," in referring to the work of Mr. F. W. Dyson, a British astronomer, calls him a "heavenly photographer."

SALON WORK Active preparations are now being made for the Second San Francisco Photographic Salon. Committees have been appointed for the preliminary work, and before the end of the month the announcements will be mailed. The elimination of the prize feature will do much toward attracting a class of photographers who did not exhibit at the last salon. Gradually California is beginning to be regarded as occupying a distinctive position in photography, and the Eastern workers who entered the last exhibition were so pleased at the treatment accorded them that they will do much to further the interests of the next salon.

The successful work of the committee last year will be an object lesson to the new committees, who will undoubtedly try to improve upon last year's operations. The printed matter will be even more beautiful, and the catalog will surpass that of 1901.

Mr. J. C. Strauss, of St. Louis, one of the leading photographers of the country, has suggested to the management of the St. Louis fair that a pavilion to be devoted wholly to photography be made one of the features of the exhibition. "Camera Craft" heartily endorses this suggestion, and promises the support of the Western photographers in furtherance of the plan.

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK
CONDUCTED BY H. D'ARCY POWER, M. D.

LUMINOUS PHOTOGRAPHS

Mercator has recently given a method of producing the above by the carbon process that is interesting if nothing more. It is dependent on the fact that certain substances, notably calcium sulphide, are luminous in the dark. A paint was, and probably still is, made of this salt for painting the surface of watch dials, match-boxes, bell-handles and other objects whose position in darkness it is useful to know. Now, if a carbon tissue be made with calcium sulphide in place of pigment and printed in the ordinary way, it is clear that if a negative were used the shadows would be more luminous than the high lights, as they would contain the greatest deposit of the sulphide. Therefore the print should be made from a transparency. Mercator advises a thick coating on celluloid, the positive being printed through the celluloid (by the process I described in CAMERA CRAFT last year). The coating formula given is:

Gelatine.....	9 parts
Luminous paint (calcium sulphide) ..	5 parts
Potassium bichromate.....	1 part
Water.....	100 parts

I see no reason why the tissue should not be made without the potassium bichromate and sensitized when required. It is hardly necessary to say that the picture requires exposure to sunshine or strong diffuse daylight in order to be luminous at night, this luminosity only persisting a few hours, but is capable of restoration by fresh exposure. Lastly, it is not an easy matter to coat celluloid with gelatine. The celluloid needs to be pinned down on a leveled board, and a fairly thick layer used.

HOLDING AND WASHING FLAT FILMS

I have been using flat films (with much satisfaction) and found it necessary to solve two questions—how to retain them in my plate-holders (Premos) and how to wash them. I knew that flat film carriers were obtainable, but that entailed waiting, so I tried putting them in the holder by pushing them down behind the spring that forces up the plate, and so far, after a number of exposures, I have not met with a case in which they have

become displaced. For cut films (they are made of heavier celluloid than roll films) to float round in a print washer striking one another with their edges is disastrous, so I fixed them with a couple of thumb tacks on a board and floated them face downward in the bath. Where large numbers are to be dealt with at once this would mean too much surface space. In such cases pinning each film to a cork, as a buoy, a method recently suggested by a writer in the *English Amateur Photographer*, would doubtless give good results.

FIXING VELOX

Dr. Liesegang, in a recent number of *Gaedcke's Wochenblatt*, writes on the fixing of Velox and similar papers. He maintains that through wrong procedure the whites are often degraded, and minute details in the high-lights destroyed, and advises as the best procedure two baths—one a five-per-cent alum bath, and the second an acid bath, consisting either of

Sodium sulphite.....	25 grams
Water.....	1 litre
Strong sulphuric acid.....	3 c. c. m.
Slowly added, to which add	
Hypo.....	100 grams
or	
Metabisulphite.....	50 grams
Hypo of soda.....	150 grams
Water.....	1 litre

The *Photo-Miniature* has devoted its June and July numbers to Telephotography and Pinhole Photography. Both books are likely to make converts to their respective subjects. So far as I have seen reproductions of long-distance work, pictorial effect has been singularly absent. Whether on account of the tastes and limitations of the producers or by reason of inapplicability of the method I know not. The illustrations in this last little book are cases in point; they illustrate the great value of the telephotographic method for bringing out architectural detail, etc., but they have no pictorial interest. If men of artistic tendencies are to be tempted to buy expensive apparatus it will be necessary to show them that they can make pictures therewith as well as secure the time on a distant town clock. Far otherwise is it with the book on

Pinhole Photography. The beauty of gradation and charming sense of atmosphere in the accompanying illustrations tempt one to start making pin or rather needle holes right away. These lensless photographs seem to solve the question of fuzzy versus sharp in the most perfect manner; they are never severely sharp, and yet have a strength in the foreground subjects that is almost stereoscopic.

Reducing Contrast: Speaking of gradation brings up the question of excessive contrast. The *Amateur Photographer* (English) gives the following procedure, which I do not recollect having previously read: "The negative is coated on the glass side, when thoroughly cold, with a matt varnish (below is given a suitable formula), applied in exactly the same manner as any of the commercial cold-negative varnishes (that is by flowing, and not by means of a brush). It should be stated that upon the quantity of benzole added to the following formula will depend the quality of the matt varnish obtained. Where the quantity is large the matt surface will be rough and very coarse, naturally very fine when it is present in very small proportion, though the formula as written is about the best for the purpose now mentioned:

Gum sandarac.....	90 grains
Ether.....	2 ounces
Gum mastic.....	20 grains
Benzole.....	1 ounce

This matt varnish will firm up in two or three minutes and in ten minutes' time will be ready for the next operation, for which we require any of the quick-drying, cold-negative varnishes now on the market. The negative is placed glass side uppermost on an ordinary retouching desk, and the heavy dense parts are gone over by a fine camel-hair brush containing the cold-negative varnish. The worker will not be long in detecting a difference in the contrasts, which will become more harmonious. Should the prints obtained from this negative still be harsh, then it will be necessary to go over the shadow portions of the negative with a brush containing a thin, weak wash of Prussian blue, exercising care that only a thin coating of color is applied."

PRINTS ON GLASS

To make a transparency for solio or other gelatine paper may sometimes be desirable. The *English Photographic News* gives the

following procedure: "The print must be printed much darker than usual; it should, in fact, be only possible to distinguish the details in the high-lights, if the results are to be used as transparencies. The prints should be toned and fixed as usual, and then plunged for half an hour in a one-per-cent solution of formaline, and then rinsed. The glass on which they are to be transferred must be coated with gelatine, rendered insoluble, and the easiest method to obtain such is to fix an unexposed plate, or dissolve the silver from an old and useless negative, then immerse in a five-per-cent solution of bichromate of potash, and dry and expose to the light, and then wash well. The print should be well squeezed to the wet gelatine, and placed under a weight under some sheets of blotting paper for an hour or two, and then immersed for a minute in cold water, and, finally, in water heated from 80° to 85° C. In a very short time the paper may be lifted at one corner and pulled off, when, after a short rinsing in cold water, the picture will be ready to be dried."

From the same source I cull the following note that promises to be useful. I would suggest that a few drops of ether on a tuft of cotton would more easily and safely remove the oil than ammonia.

"Most amateur photographers have tried local reduction or intensification on negatives, and have been exasperated at the plate being spoilt by the work going farther than was intended—the chemical solutions spreading beyond their limits. The use of olive oil will prevent this. Take a fine camel-hair brush and dip it in the oil, then wipe lightly with a rag, and with the moistened brush go carefully, and most exactly, round the part to be locally treated. If little oil be used, the limitations can be most exactly marked, and subsequent solutions supplied without the least risk of spreading where not wanted. Weak ammonia will finally remove the oil."

COPYRIGHT

All amateurs who produce work for reproduction or exhibition should copyright the same. The *Photographic Times* for July contains a most valuable paper on the subject with exact instructions for would-be copy-rightists. Mr. W. A. Miller, a responsible official of the Copyright Department, is the author, and the accuracy of his views is sustained by the head of the department to whom the manuscript was submitted.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

OUR POSTAL CAMERA CLUB The first album with the accompanying club letter containing route list, proposed rules and the criticisms of the individual prints by Professor Lange, started on the route July 3d, just three days late. Thirty members are represented. There are four or five on the waiting list, and should a few more of my readers signify their desire to join, by promptly sending in two or three prints, I will start two albums September 1st. This will allow of better routing and quicker trips. Thirty members are, no doubt, too many for an album expected to make the trip in one month. Very gratifying are the kind expressions of appreciation that reach me as the album goes from one to the other of the members. Limited time may prevent my answering in all cases, but the letters are none the less appreciated. Following is the present route list:

Miss A. F. Lacy, 46 Caselli Ave., San Francisco, Cal.

Henry Kern, 411 Locust St., San Francisco, Cal.

J. V. A. Frates, 2020 Linden St., Oakland, Cal.

Berton W. Crandall, Palo Alto, Cal.

S. L. Bacon, 393 South 10th St., San Jose, Cal.

H. S. Shain, Wrights, Cal.

Auton L. Anondson, Borate, Cal.

Harry Eckenrode, 1134 5th St., San Diego, Cal.

O. Moncur, Yuba City, Cal.

Frank P. Storm, 112 North 8th St., St. Louis, Mo.

F. E. Foster, Iowa Falls, Iowa.

Chas. B. Brunner, Easton, Pa.

J. Clair Hegarty, Utahville, Pa.

Frederick Pavlicek, 440 East 77th St., New York, N. Y.

Henry Bowe, 412 East 83d St., New York, N. Y.

Henry Hall, Dongan Hills, New York.

Horace W. Gillett, Box 1276, Penn Yan, N. Y.

H. Florence Oliver, 5 Bloomfield St., Lynn, Mass.

Geo. R. Bosworth, Williamstown, Vt.

Louis Fleckenstein, Faribault, Minn.

A. J. Swanson, Faribault, Minn.

Miss Mabel Fulton, 731 West 2d St., Duluth, Minn.

G. R. Perkins, North Bend, Neb.

H. W. Baker, Barker Block, Omaha, Neb.

R. E. Dawdy, Hoquiam, Wash.

W. F. Hunter, 589 5th St., Portland, Or.

Jessie J. Beone, Yaquina City, Or.

R. R. Chevalier, Box 356, Sacramento, Cal.

G. C. Cook, Box 791, Denver, Colo.

J. B. Brown, Jr., Box 1523, Denver, Colo.

A correspondent in Minnesota wishes to know how he may determine if his lens is free from astigmatism. If he will draw a series of both perpendicular and horizontal lines near each corner of a large sheet of paper and photograph it, taking care to focus sharply, he can easily determine if astigmatism exists. If not, the lines in one direction will be as crisp and sharp as they are in the other.

Now that all the journals are teeming with laudatory comments on the personality and achievements of the late H. P. Robinson, that at the most are only a part that is due, I would like to quote a paragraph from an article by him in *The Year Book*, some nine or ten years ago, under the above title:

It has often struck me that those who want to make pictures by photography scarcely go the right way to work in devoting nearly all their time and energy to the sciences of chemistry and optics; it is an entire misapprehension of the qualities required. I would rather fall on the other side, and recommend you to be as ignorant as you conveniently can about other matters, but learn art perfectly. I say "as you conveniently can," because I don't want you to neglect the study of the necessary technicalities that go to the formation of a negative or a print. This is now exceedingly simple and does not require any real knowledge of the two sciences I have mentioned. Now, the construction of a picture is like mathematics—the farther you go into the matter the more there is to learn; therefore, give your time to it.

Prints on developing paper not intended for mounting may be kept from curling by immersing them, after the final washing, in the following solution:

Water.....	1 ounce
Alcohol.....	4 ounces
Glycerine.....	3 ounces

PORTRAITS IN IMITATION OF PAINTINGS If you wish to try something in the way of a novelty, get a large-sized frame, elaborately carved, and a square of coarse canvas, tightly stretched on a frame, and try the following method: Take the frame and paste strips of black or white paper all around the edge of the back, so as to extend a few inches outside the frame all around. This will prevent the necessity of trimming the finished print close to the frame. Stain the canvas a darkish brown with a solution of coffee. If left white the exposure made on it alone will degrade the shadows in the finished picture too much. Place your subject behind the empty frame in front of a dark background and give an exposure a trifle short. Cap the lens and bring the canvas close up behind the frame, taking care to move neither the frame nor the camera. Give nearly as long an exposure to the canvas as you did to the sitter, and the result will be a negative that will show the grain of the canvas in a realistic manner that, with the aid of the frame, will suggest very strongly the reproduction of an oil painting.

It has been stated that a piece of blue glass placed between the light and the negative from which the enlargement is being made will give a bromide enlargement free from intense lights and shades and with more pronounced half-tones. Will some of my readers give the matter a trial and let us know how they succeed?

If the correspondent who gets yellowish whites in his aristo-platino prints because the paper is a trifle old, will add enough ammonia to the fixing bath to just cause it to smell slightly of ammonia his troubles will no doubt cease. I have tried this plan quite often and it worked admirably. The formula that goes with each package of paper is as good as any that I have been able to find. If you do not secure

good results with it, it is because you have not followed directions close enough, and you would be hardly likely to do much better simply by changing your formula.

The question is frequently asked as to what exposure is necessary in surf and wave studies. Rather a broad question, only answered by giving the exposure notes corresponding to a few of my own wave negatives. The exposures quoted were all fairly correct, coming up in the normal developer in good shape. They were all made in the early part of September with a Goerz lens and a Triplex shutter. Cramer's Banner, Rapid Isochromatic and Seed's Non-Halation plates were used. A light, greenish yellow screen was used with the Iso plates, and all three plates were then considered of about the same speed. Following is my table:

	P. M.	Stop.	Seconds.
Cloudy.....	4:30	F 11	1-35
Bright sun.....	2:45	F 22	1-25
Bright sun.....	3:30	F 22	1-35
Sun behind clouds..	5:30	F 8	1-25
Sun fairly bright..	5:30	F 16	1-25
Bright sun.....	4:00	F 16	1-35
Bright sun	1:30	F 32	1-50

It must be remembered that a great many forms of shutters work slower than the time indicated on their dials, and that few of them have the light efficiency of the Triplex shutter. An Iso plate is a disadvantage unless one wishes to bring out distant vessels or hills. In my case I wished to show distant fishing-boats against the sky. A non-halation or backed plate of medium rapidity is my preference.

One of my correspondents has been asked for his advice as to the kind of camera best suited for the beginner's use. This prospective photographer did not wish to court disappointment by buying cheap and useless apparatus, yet he did not wish to invest a large sum and find, as he became more proficient, that he did not buy just what best suited his requirements. Neither did he wish to burden himself with an instrument unnecessarily complicated, nor one the cost of which would be a cause of regret should he discard it after a little practice. My advice in this case would be to start with a cheap stand camera, 5 x 7 or 6½ x 8½ size, and let him learn to use it thoroughly. A cheap stand-pattern camera by any reputable maker, is cheap only in its lack of complication, varnish and lacquer. A single view lens

will go nicely with it, add but little to the cost, and, although not the best lens for architectural subjects, a little slow for portraiture, and hardly wide enough angle for interiors, will make as good, if not better, landscapes than the high-priced instruments. One season with such an outfit, with the experience gained in using the ground glass, focusing screw, lens, stops and tripod, will fit him for choosing his permanent outfit and for using it to advantage.

He may insist that he only wishes to use a hand camera, but hold your ground. In starting with a hand camera a beginner will waste enough material the first season to buy a good stand camera. Starting with a cheap stand camera he will have saved enough in the same time to buy a good hand camera, while at the same time he will have learned much more than he would by using the hand camera from the start. Look back at your own experience as a novice and see if I am not right about it.

NEGATIVES OF BLACK AND WHITE SUBJECTS In copying black and white drawings, printed matter and the like, it is hard to get the contrast desired. One trouble that is met with is the difficulty of determining whether thin negatives are the result of under or over exposure. The only way this can be overcome is by using your normal developer and letting the time of appearance of the image tell you in which direction your error lies.

Iodide of potassium is a much more powerful restrainer than the bromide. Try adding a drachm each of a two-per-cent solution of both the iodide and bromide of potassium to every three ounces of your developer. Give about double the exposure. Development will be slow, but will produce exactly what is desired, clear glass and image and opaque ground.

Different plates require varying proportions to obtain the best results, but a few experiments will set you right. If veiling occurs decrease the bromide.

LOCAL REDUCTION OF NEGATIVES Nearly all of us have tried to reduce a negative in places, and how few have succeeded in obtaining results. I read a hint in one of the foreign magazines the other day and gave it a trial. The idea is to simply go all over the parts of the negative not desired reduced with a brush just lightly dampened with olive oil. If the brush is wiped with a soft rag after

being dipped in the oil, leaving only a trace on the brush, the outline of the part to be reduced can be followed to a nicety. The oil will prevent the solutions, also best applied with a soft brush, from spreading beyond the desired boundary. The dilute solution of ammonia can be used to remove the oil after the reduction has been effected. The plan worked fine in my hands, and I advise the trial of it by those wishing to reduce portions of a negative without altering the whole.

A correspondent in the *Australian Photographic Review* complains to the editor that he asked a brother amateur what was the trouble with his negatives, and was told that there must be something wrong with the developer. On being asked what kind he used, this superior individual replied that it was one of his own make up and that he doubted if the novice could use it. Our poor tyro goes to another with a request that he develop a couple of his negatives for him. This he does with satisfactory results, but, on being asked as to the developer employed, replied that he was not at liberty to give the particulars, as he was pledged to secrecy. Our poor tyro complains to the editor that he does not seem to get in with the right "push." That is the word he uses. Now, just imagine this individual out at Golden Gate Park some nice Sunday, and let the news get out that there was a fellow over in the further end somewhere that wanted a good formula for developing. You can imagine the rest.

DRYING NEGATIVES WITH ALCOHOL Some one in Denver finds markings after drying negatives with alcohol, and asks if it is because the alcohol is not pure. I hardly think his surmise is correct. The most likely cause of the spots is the presence of a slight deposit on the surface of the negatives left there after washing them in hard water, or water containing lime or other foreign substance. Negatives should be well swabbed off with a tuft of cotton wool and then lightly rinsed before passing to the alcohol bath, or even before being dried in the ordinary way. This foreign matter collects in spots on the surface of the soft film and prevents uniform action of the alcohol or washes.

If not removed, these streaks are more pronounced when the negative becomes dry than they were while the negative was still in a damp condition.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

A NOISELESS SHUTTER

How often we hear the remark, "That would have been such a good picture, but the click of shutter caused the child to move just at the wrong time," or "she had a lovely expression, but when the old shutter rattled it completely vanished." Not only these remarks, but many others of a similar nature are heard all over the land by both professional and amateur. One day, having more time than money on hand, I started out to find a noiseless shutter. I had a merry chase for several hours, until I learned through a mutual friend that Mr. Bushnell, out on Market Street, had an ideal one, so out I went, and explaining the object of my visit, I was kindly shown into the operating room, where the long-sought-for shutter was shown and explained to me by Mr. Lawrence Terkelson, the operator. The mechanism is simple enough; there are four brass castings fastened to a metal cylinder which fits around the lens and screwed to the inside of the lens board. Upon the brass castings two velvet-covered doors swing; these are opened and shut by two semi-spherical rubber disks, which are inflated by means of a bulb connected by the usual tube. Any exposure can be given from a quarter of a second to an indefinite length of time by closing the tube so that the air cannot escape. As the doors hinge and open from the center, the illumination is uniform all over the plate, and nothing can be heard before, during, or after the exposure. The operator told me that he has timed portraits during the period when he was holding the sitter's attention by an animated conversation, and the subject was entirely oblivious to the fact that the light, lens and noiseless shutter had already done its work.

DIFFUSION OF FOCUS;

It is remarkable how little attention the average portrait photographer pays to the proper use of his lens and diaphragms. For example, the other day, in a conversation with a professional, I asked him if he took advantage of the different effects to be had from the use of the various sized diaphragms. He said that "life was too short

and he did not get enough money for his work to take the time fooling around with stops," and that the middle one was good enough for him.

Now, I know that if he would experiment, and incidentally study his stops, he would find life long enough and get a good deal more money for his work.

If we compare the portraits made in a third or fourth class "Photo Parlor" and one made by a photographer with artistic instincts and training, the difference must surely be apparent to the most unobserving.

The one will be hard, sharp cut and cast-iron looking, with everything on the same plane, and not a particle of atmosphere surrounding the subject, making it unsatisfactory and painful to look upon. The other will have a subtle, indescribably charming environment, not only from the superior lighting and pose, but also by the different planes of distances observable, thereby causing a certain plastic appearance, roundness of figure and softness that is very agreeable and satisfying to the eye.

How is this transformation brought about? To a great extent by intelligent focusing, that is, if a three-quarter view showing only head and shoulders is taken, the nearest eye should be sharpest and all else on the same plane as the side of the nose and corner of the mouth. The farther eye and side of cheek should be a little less in focus, so that the outline will seemingly blend in with the background. When focusing with a portrait lens, full open, this effect is exaggerated, and a diaphragm should be inserted that will give the desired result. This must be carefully observed on the ground glass and not placed in at haphazard. The largest possible stop consistent with the effect desired should be used.

Those who use the modern anastigmat view lenses must have found that it is impossible to get the desired effect of softness in portraits, even when using the full-open lens, on account of the depth of focus making everything equally sharp on the different planes of distance. This defect can be very easily remedied by producing what is called

diffusion of focus, that is, the front and back combinations are both unscrewed until they are as far apart as they can be without coming off. By this means a very desirable quality is obtained in the lens, as it diffuses the focus and gives a decidedly pleasing softness of outline. The lens can be used wide open, thus gaining considerable in shortening the time of exposure.

LOOK TO YOUR RUBY FABRIC

This is the season of the year when the intensely white light of the long summer days has a decided effect upon the ruby fabric, which it changes to a brown color that gives no real protection to the sensitive plate. This applies, of course, to those who use daylight instead of artificial light to develop by.

Many use two thicknesses of the fabric. It is the outer one that changes, while the inner retains the color very well. Right here is where the trouble comes in. We do not see any change, and, consequently, are deceived as to the true actinic quality, and are therefore liable to condemn the plates as working weak and foggy.

I find that the best thing to do is to use two thicknesses of the ruby fabric and a thin sheet of orange postoffice paper. By this means the fabric will retain its non-actinic character for years, even after the outer paper has been considerably bleached. Again, it is much less expensive to replace the paper when necessary.

It is also advisable to have a plate-box cover for each of the different sized developing trays. By tacking a strip of wood diagonally across the top of the cover, this will act as a stiffener and serve as a convenient handle. Those habitually using these covers will find their plates always working uniformly. Never omit them when developing isochromatic plates.

COPYING MATT SURFACE PRINTS

It has become an established rule among professional photographers, and even the half-tone workers have the same delusion, that only burnished and glacé finished prints make the best copies. Perhaps for the purposes of the ultra-scientist, where all artistic feeling and merit must give way to microscopical detail, it may seem to be necessary to prefer the shining surface.

I have proven to my satisfaction that the copying of matt surfaces, if the negative was sharp and clear, gave as good, if not better, results, even for scientific work, than that

usually desired by the best of workers. The reason is this, that in photographing the glossy prints reflections have to be overcome, necessitating the turning of the print away from the strongest source of light, so that there is an immediate loss of detail which cannot be made up by extra exposure. Besides, the shadows are dark in smooth paper and the high-lights are very white and expressionless, qualities which are naturally exaggerated in the copy.

The matt paper prints from the same negatives are not so contrasty, and a copy gives more of the true value of the original, because it can receive a full, flat light, and a piece of white cardboard or a mirror on the side opposite the source of light will obliterate any irregularities in the grain of the paper.

Therefore, if you wish to preserve the greatest possible artistic merit of the original negative, do not give the half-tone people any but matt-surface prints. They may kick, but let them; you know what you want.

THE CAMERA AND PUBLIC MEN

A few days ago I read in an out of town paper that it had been reported that President McKinley cannot go out of doors for a breath of fresh air without being followed by crowds of camera fiends intent upon taking his picture.

All of the pictures that I have seen of the President do not show him to be particularly embarrassed; in fact I should think that when he saw that he was under fire he would brace up to give the photographer a good show. From personal experience and that of others whom I have asked I believe that most public men are not averse to have themselves immortalized on a kodak film. And why should they? They are to a certain extent public property, and just as their characters and reputations become once they pose as public men, they might just as well pose as a subject for the camera, even when fired at in the street.

One of the most original inducements ever offered to the photographers by a manufacturer of dry plates is the one now being offered by the Monroe Dry Plate Company, Box E, Jamestown, N. Y. This company offers a small package of their special plates for rapid work, either 4x5 or 5x7 with developer, express charges prepaid, for twenty cents. Here is an opportunity that no enterprising amateur should neglect.

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS OF THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

An ideal photographic trip, in a new houseboat, through the Illinois Canal and down the Illinois River, stopping at Marseilles and Ottawa, and down as far as Pekin, will be taken by some of our members this month. The steam launch Viking, owned by a party of amateur photographers, will convey the houseboat on this trip. A complete darkroom is one of the many features of the boat, which is about as perfect and comfortable in its appointments as one's own home.

A captain, cook and crew will relieve the party of every care, and all the photographers will have to do will be to eat, sleep and expose plates, and incidentally to develop them. A full cargo of prize-winning salon pictures will undoubtedly be one of the results of the trip.

The announcements are now out for the forthcoming salon, to be held October 1st to 20th, and the following extracts may be of interest:

The Art Institute of Chicago has the honor to announce that, under joint management with the Chicago Society of Amateur Photographers, the Second Chicago Photographic Salon will be held in the galleries of the Art Institute from October 1 to October 22, 1901.

The purpose of the salon is to bring together the best examples of the photographic work of the year, rigidly to be selected by a competent jury.

Jury of Selection—Henry Troth, Philadelphia, photographer; Wm. B. Dyer, Chicago, photographer; J. H. Vanderpoel, lecturer in department of figure drawing and painting in the Art Institute of Chicago; Charles Francis Browne, lecturer in department of landscape painting in the Art Institute of Chicago; Wm. Schmetdgen, water color painter, illustrator on Chicago *Record-Herald* and amateur photographer.

The rules governing exhibits are practically the same as last year.

Inquiries and application blanks have been called for by prospective exhibitors, both in this and other countries, and all signs indicate a full and fine exhibit.

DR. DETLEFSEN'S EXHIBIT

By M. W.

Following the Members' Exhibit, the club has had upon its walls a selection from the works of Dr. F. Detlefsen, which has proven

very interesting and has caused much discussion.

Although Dr. Detlefsen is not bound to any particular school, his pictures, ranging from perfect definition to the vaguest outlines and from strong contrasts to the delicate scale of tones in that masterpiece, "Alter Ego," known to the readers of *CAMERA CRAFT* through a reproduction in the salon number, yet his individuality is so stamped on his work that his *cachet* is recognized in whatever style or medium he may be working for the moment. It is hard to tell in what particular element of pictorial photography Dr. Detlefsen is most successful, as his work is marked by so many high qualities.

Some of his pictures, as "Dreaming of Bygone Days," "Quid Nunc," "Alter Ego" and "Sad Memories," are full of sentiment. "Alter Ego" and "Hildegard" hold one by their originality, while No. 2, entitled "Japs," is so thoroughly decorative and Japanese in treatment that it requires a close look to see that it is photographed from life and not from a "Kakemono."

The portraits of Mr. E. and of Mr. Hansburg, and the genre study called "A Happy Moment," are strong and characteristic portraits in the dark tones suitable to the rugged type of the subjects, while "She Stoops to Conquer," "Anita," "Through a Vale of Tears," "Desideria" and "A Russian Country Girl" are beautiful examples of that delicate treatment in a short scale of pale tones in which Dr. Detlefsen has, perhaps, made his greatest success and shown the most originality. "Childhood's Sweet Dreams" and "The Young Tragedian" are examples of fine lighting and masterly treatment of draperies. The innocence, mirth, curiosity and *naivete* of childhood seem to appeal forcibly to Dr. Detlefsen, and the pictures in which these qualities are brought out are too numerous to specify, though the unconsciousness and merriness of the little lady in "It's My Laugh" should not go unmentioned.

Within the last few weeks Dr. Detlefsen has, for the first time, turned his attention to landscapes, and of the ninety-one pictures in the collection eighteen are of this class.



BUSINESS NOTES



Mr. H. P. Lovick, the well-known scenic photographer, has been employed as a demonstrator by the manufacturers of Velox paper, and will tour the State during the next two months.

P. F. Adelsbach of Tulare has removed to Porterville, where he will open a gallery.

The Rochester Optical and Camera Company tell us that they are very proud of their Pony Premo, No. 6, which, in many respects, is a practically new instrument. The new auto-shutter, working on purely automatic principles, is one of the most pronounced improvements of the year. The amateur contemplating purchasing a new camera will do well to investigate the merits of this particular style.

Messrs. Burke & James, of 118-132 West Jackson Boulevard, Chicago, have been appointed the Chicago agents for the *Photo-Miniature*. We congratulate the *Miniature* on procuring such live and progressive agents.

Mr. Wm. Helmquest of the Stuparich Manufacturing Company is now in New York. In a recent letter Mr. Helmquest grew enthusiastic over the multitude of new things he is securing in the way of photographic mounts.

There will be an exhibition of photographs in connection with the eighth annual Spokane Interstate Fair. Exhibits should be sent at any time before September 5th, and should be addressed to Dr. A. H. Coe, Interstate Fair, Spokane, Wash.

The following prizes are offered by "Rotograph" for prints on paper manufactured by them: One grand award of two hundred dollars (\$200), in cash, for the all-around *best* picture, whether a contact, an enlargement or a postal card—made on any grade of "Rotograph" paper. For contact prints—not smaller than 4 x 5 size: Seven cash premiums amounting to \$125.00, also forty premiums of, each, one dozen 10 x 12 sheets of "Rotograph" bromide paper, value \$1.10 per dozen. For enlargements—10 x 12 and upwards: Seven cash premiums amounting to \$125.00, also forty premiums of, each, one dozen

10 x 12 sheets of "Rotograph" bromide paper, value \$1.10 per dozen. For pictures made on sensitized "Rotograph" postal cards: Four cash premiums amounting to \$50.00, also twenty premiums of, each, one dozen 10 x 12 sheets of "Rotograph" bromide paper, value \$1.10 per dozen.

A copy of the *Bromide Monthly* and full particulars of the competition will be sent upon application to "Rotograph," 101 Fifth Avenue, New York.

Messrs. F. L. Schafuss & Co., 94 Reade Street, New York, album manufacturers for unmounted photographs, are preparing for a large trade the ensuing season, and the several new styles which they propose to show the trade they claim will be "sellers at sight." A postal requesting price list and discounts will receive prompt attention.

The C. P. Goerz optical works just completed its one hundred thousandth double anastigmat lens which happened to be a number nine, series three, of twenty-four inches focus. This event was adequately remembered by a celebration in the factory. It may certainly be considered as a magnificent record to have made and marketed inside of eight years one hundred thousand anastigmat lenses, and undoubtedly is one of the convincing proofs of the high perfection of the Goerz produce. CAMERA CRAFT congratulates the Goerz Company, both for the celebration and its cause.

Mr. E. W. Thomas, Chicago correspondent for CAMERA CRAFT, captured the *Record-Herald* prize for the best picture of Montgomery Ward's tower. The successful picture shows a very clever handling of a difficult subject, and Mr. Thomas has been generally congratulated upon his ability to inject artistic feeling into a photograph of so complex a subject.

Messrs. Kirk, Geary & Co., 220 Sutter Street, San Francisco, have recently placed on the market a new blotting paper for prints. It is called "Lintless K. G. Blotter," and is said to be chemically pure and absolutely lintless. A specimen sheet will be sent upon application.

One of the most valuable catalogues ever issued for the use of those interested in lantern work is that of the McIntosh Stereopticon Company, Chicago, a copy of which has been received in this office. Besides an unusually full line of instruments the catalogue contains one of the fullest and most complete lists of slides ever published. It is, in fact, invaluable to any one who owns a lantern.

The new Plastigmat lens recently placed on the market by the Bausch & Lomb Optical Company seems to have been an immediate success. The demand for the new lens has been so great that the factory has been barely able to supply the demand.

F. L. Schafuss & Co., 94 Reade Street, New York, are placing before the stationery trade a new, novel and original line of albums for the collection of postage stamps. It has supplied the long-felt want of which the stationer and the philatelist have long been in search, and the gratifying results in large advance orders have proved the success of the new styles.

Those who have used Dixie developing paper will be pleased to learn that a San Francisco agency has been established, and that in the future a full stock will be carried in the West. Mr. C. Brewster has been appointed as the agent at 432 Montgomery Street, San Francisco.

The New York Camera Exchange, at 114 Fulton Street, New York, are making big alterations in their present quarters. When they are completed the salesroom will be enlarged to twice its former size. Messrs. J. H. & J. Andrews, the proprietors, are among the most progressive of the New York dealers.

A very pretty romance, which will interest every member of the photographic fraternity, culminated at Reno, Nev., on Wednesday, July 31st, where Miss Angela Le Prohn, of San Francisco, and C. Ernest Cramer, the genial treasurer of the Cramer Dry Plate Company of St. Louis, were married.

CAMERA CRAFT regrets that the news reached it too late to tell the story in detail, but offers its heartiest congratulations to the happy pair.

CHORUS.
I can't tell why I love you, but I do - oo - oo

43 THE PHOTO-MINIATURE NOTES

The *Photo Era* for April contains a profusely illustrated account (third paper) of "The Moki Snake Dance," by A. C. Vroman; a prose-poem on "April" in which the editor invites the gentle reader to "stand on the edge of spring," and catch things; and sundry advertisements of rye whiskey, corsets, garters, compounded antidote coffee, and other interesting items. Price, 15 cents per copy, and a bargain at the price. [Photo Era Pub. Co., Boston.]

Dark Brown Roast. If there is anything on which the editor of *Photo Miniature* is sensitive, it is his inability to write poetry, and get general advertising. The slightest suggestion of anything poetical in a photographic magazine suffices to rouse his otherwise amiable and prosaic nature and prompts him to say things like—

We can almost hear the chuckle of delight, and see the ghoulish glee with which the Editorial mind delivered itself of this last paragraph, and thought, though it did not write—this is a dark brown roast for the *PHOTO ERA*. Meanwhile, not being a house organ we can only plead in extenuation of our fault of carrying advertising matter in our pages, that we are consumed with a desire to pay our bills promptly, and advertising helps to pay bills.

PHOTO ERA

NEWS OF CLUBDOM

CAMERA CRAFT IS THE OFFICIAL ORGAN
OF THE CALIFORNIA CAMERA CLUB,
THE SAN DIEGO CAMERA CLUB, AND
THE PENDLETON (ORE.) CAMERA CLUB

PHILADELPHIA PHOTOGRAPHIC SALON 1901

The following announcement has been sent out by the Photographic Society of Philadelphia:

The Pennsylvania Academy of the Fine Arts has the honor to announce that, under joint management with the Photographic Society of Philadelphia, the Philadelphia Photographic Salon for 1901 (fourth year) will be held in the galleries of the Academy, Broad Street, above Arch, from November 18 to December 14, 1901.

The purpose of the salon is to exhibit that class of work only in which there is distinct evidence of individual artistic feeling and execution, the pictures to be rigidly selected by a competent jury.

Pictures which have already been shown in Philadelphia at any exhibition open to the general public will be liable to exclusion.

No awards are offered, and no charge will be made to exhibitors. Each exhibitor will be furnished with a catalogue, which will be the official notification of acceptance.

No exhibitor must submit more than ten pictures, each of which must be framed separately.

The title of each picture and the exhibitor's name and address must be clearly written on the labels provided, which must be attached by the exhibitor to the back of each picture. Nothing may appear on front of picture except title and exhibitor's name.

No accepted pictures may be removed before the close of the exhibition.

Arrangements will be made for the sale of pictures if desired, subject to a commission of 15%.

All communications and all pictures submitted for exhibition must be addressed to the Pennsylvania Academy of the Fine Arts, Broad Street, above Arch, Philadelphia, Pa., U. S. A. All pictures must be forwarded at owner's risk, carriage prepaid, and delivered at the Academy not later than 5 P. M., Wednesday, October 30, 1901.

The management will use all reasonable care to prevent any loss or damage to pictures in its charge, but will not be responsible for such occurrence.

Foreign contributors are requested to submit their pictures, unmounted, by post. The management will suitably mount and frame them before exhibition, at no cost to the exhibitor, and will afterward return them by registered post.

H A V E

VELOX

prints made from your negatives.
Our prints are noted for tone,
delicacy and vigor. Try them.



Goldsmith Bros.

CAMERAS *and* SUPPLIES

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WANTS

Free to those seeking employment.

Three lines, one insertion, 50c. Three insertions \$1.00.

For Sale—A well-stocked and patronized photographic gallery in a prosperous Arizona district. Owner grown suddenly wealthy from mining development. Apply to Henry Monahan, 620 Clay St., S. F.

A strictly first-class retoucher, negative etcher, and stippler, who can also operate and assist with most work in studio, desires engagement about September 1st, or would like to rent furnished studio of moderate size. Address Claes F. Ericsson, 56 West Second South Street, Salt Lake City, Utah.

For Sale—One of the leading galleries in San Francisco, Market Street location. Fine opportunity for first-class man. Address J. T. B., care of Kirk, Geary & Co., 220 Sutter Street.

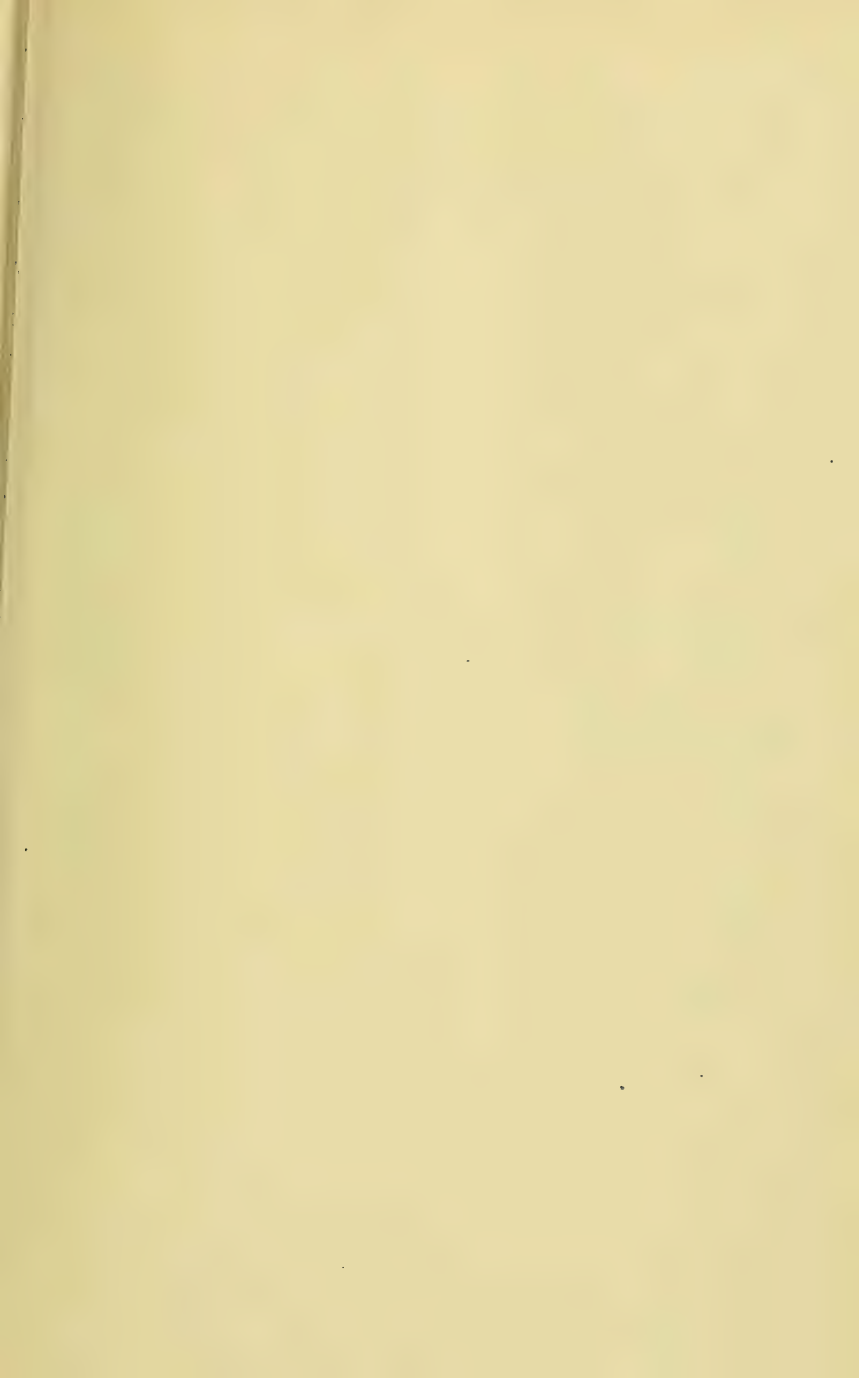
For Sale—A fine photographic car, well furnished. The only gallery in a good town of 2000. Cabinets, \$3.00 dozen. Splendid location for party with limited capital. Address M. D. Sloat, Oakdale, Cal.

For Sale—Photograph gallery in good town, doing a good business. Cheap for cash. Only gallery in town. Good prices. Owner compelled to go East. Address Groves, Livermore, Cal.

\$350 Cash—Will buy a modern, well-furnished Studio in the Mission, San Francisco; \$650 worth of apparatus and furniture in sight. For particulars address L. D. Hicks, 220 Sutter Street.

At—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

A GOOD EXCHANGE MEDIUM
FOR AMATEURS





"MOONLIGHT"
by KLEIN & GUTTENSTEIN

CAMERA CRAFT

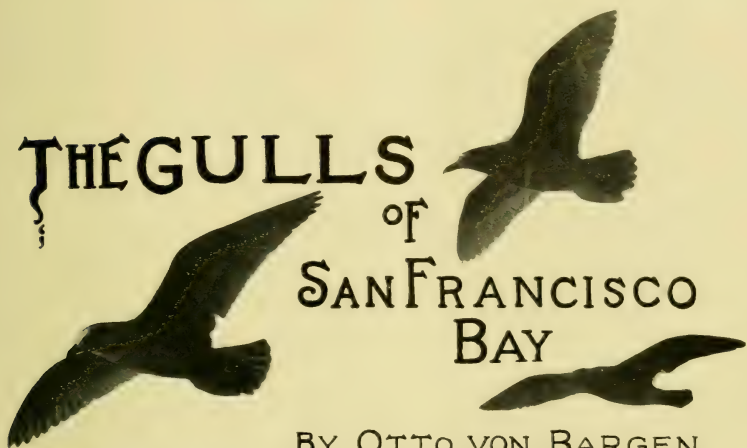
A PHOTOGRAPHIC MONTHLY

VOL. III.

SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1901

No. 5

THE GULLS OF SAN FRANCISCO BAY



BY OTTO VON BARGEN.

The gulls of San Francisco Bay are known to every artist and every photographer who has visited the Golden State. In no harbor in the world are they so plentiful, and nowhere is there offered better opportunities for successful photographs of birds in motion.

Every boat that crosses the bay on any one of the several ferry lines is followed closely by flocks of these graceful creatures, circling about each other, now making a sharp turn, now sinking to the water's edge, again rising and almost brushing the faces of the passengers seated on the upper deck, and even alighting on the rail and wire stays of the boat.

A bright, sunny day finds them more ready to honor the boats with their company. On other days they are somewhat inclined to remain contentedly on the roof of one of the neighboring wharf sheds, forming a mantle of gray against the dark brown of the roofs. At other times vast numbers of them visit the beach above Fisherman's wharf, and closely examine the drift left there by the outgoing tide. Here one can walk within a few feet of them, focus if necessary, and secure a picture as some motion or sound alarms them into flight, filling the air with the graceful lines of their spreading wings. Do not imagine they are gone, for they will soon return. Another and another picture may be made of them before they finally seek a new location.

The hay wharf at the mouth of Islais Creek is often visited by large flocks, but here there is less opportunity of getting within close range than at the other locations. However, the boats and schooners and the ever-changing

scene at the mouth of this creek add a charm that is worth the waiting entailed. Being at a greater distance longer exposure may be given than in the case of birds flying close at hand; in fact, the same exposure that will give full-timed negatives of the shipping with a fairly large stop, will show the gulls quite dis-



SOARING

tinctly, if far enough away to be only just distinguishable as such, on the plate.

Where individual birds or small groups are desired, and such pictures are, perhaps, most pleasing, the ferry-boat should be chosen. The rear upper deck is the most desirable location. A trip to the restaurant below will provide you with a few pieces of stale bread, the ends of the loaf and the like, making you the more certain of their company and in increased numbers. Small pieces thrown in the air are almost sure to be caught in their bills before reaching the water. The assistance of a friend can be advantageously employed in this part of the work.

Any ordinary shutter will give sharp negatives while the birds are soaring quietly along, but one is limited to single, or very small groups. Where several are included on the plate one or more are sure to be making a quick turn or rapid change in the motion of their wings, and great speed is necessary. A focal-plane shutter, with its high speed and great light co-efficiency, is imperatively demanded if the most satisfactory results are desired. One should focus upon some object at the proper distance to give the images of the birds the desired size on the plate, and then avoid making exposures unless they are exactly at this distance. At the large aperture demanded by the high speed of the shutter little depth of focus will be obtained at the short distance focused upon.

In taking groups of the birds the focus should be set a little further away, where the depth will be a trifle greater, but care must be taken that none of the birds are nearer than the plane focused upon. Should a few be beyond this plane it will not matter so much; they being smaller than those in sharp focus, any indistinctness will not be so noticeable.

As to lighting, the sun shining on the further side of the subjects brings out the transparency of the wings, with the head and body in shade, while a direct light on the bird brings out the head and body with the wings in shadow. The latter is, perhaps, the most desirable, it being also less liable to give trouble caused by the strong light reflected from the water.

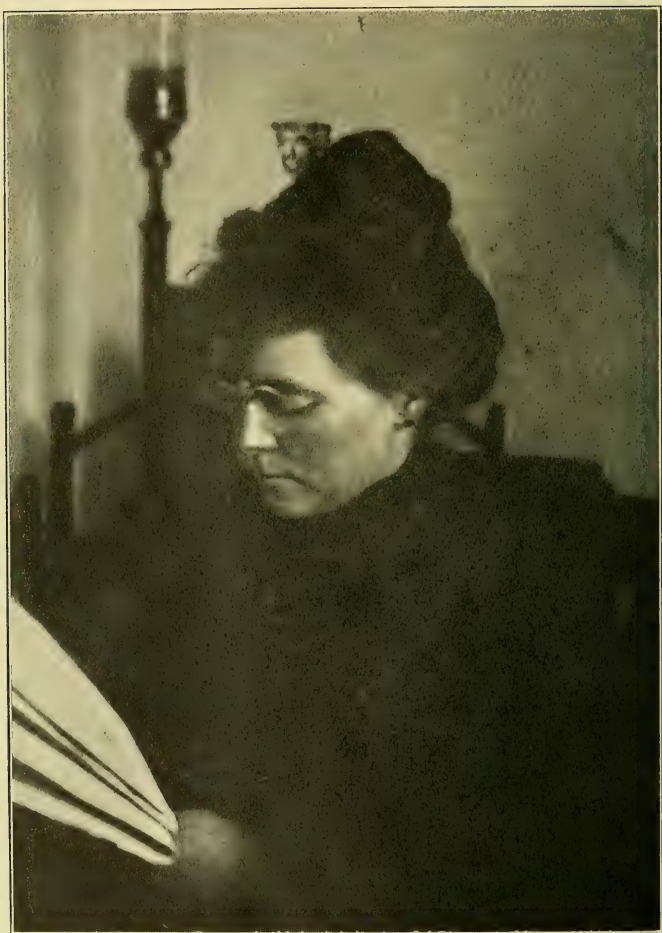
Another hint that I think will prove of value to you is this: Where the birds are seen with their legs drawn up close to the body they are either soaring or flying along steadily; where their legs are down they are in the act of rising in the air or beginning to turn.

Development of these negatives should not be forced. The large stops used and the intensity of the light on the water combine to make the rapid plates employed seem even more prone than usual to give fog if forcing is attempted. Use a well-diluted developer, take plenty of time, and keep the tray covered with a piece of cardboard as much as possible while developing. One of the non-staining developers is preferable, as the constant rocking of the tray is with them less imperatively demanded.

Do not miss an opportunity to secure larger groups at a slightly greater distance, particularly if backed up by clouds. Such negatives are even more desirable than the best cloud negatives when one wishes to relieve the "bald-headed" sky of shipping views and the like.



SWIFT FLIGHT



BY H. D'ARCY POWER, M. D.

THE READER

FROM A PAPER NEGATIVE

PAPER NEGATIVES

BY H. D'ARCY POWER, M. D.

We hear little of paper negatives these days, at least on this side of the Atlantic. In England and Germany they are still appreciated, and coated paper is there obtainable for this purpose. I say "still," because paper negatives antedate glass, and fifty years ago were known as Talbottypes. Some months ago, a friend whose photographic experiences date back to these early days, gave me such a glowing account of the good qualities of these old paper negatives, that I became fired with the desire to experiment. No. caring to await a supply from England (where the Thornton Company sell it under the name of paperoid film), I thought I would see what I could do with the native article. A quick emulsion and a thin paper were the two prerequisites. Eastman's Standard A is thin, and its rapidity on the Watkins system is scaled at 15. A Banner plate figures at 80, therefore I figured that bromide paper would need five times the exposure.

Some of this paper I cut up into pieces 5×7 and placed them in my plate-holders, holding them flat by means of a kit, and proceeded to take pictures. I tried all things, portraiture, landscape and still life, and obtained equally good results in all. Prints made from the resulting negatives possessed excellent gradation and if printed on matt-surfaced paper gave no indication of grain, as will be seen by the accompanying examples. It is true that there is an absence of minute details which would militate against their use for enlargements, but which for other purposes is rather an advantage; thus the face of the reader did not require retouching, which would certainly have been necessary with a dry plate.

On the other hand, if retouching is required, or it be necessary to even greatly modify the negative, the paper surface, worked from either side, permits of alterations that would be quite impossible with either glass or celluloid. When in addition it is remembered that bromide paper is just half the price of glass plate, a fraction of the weight, and that the negative can be printed from either side, and afterwards stored in very little space, it is sufficiently clear that its use is attended with many advantages. The manipulation differs but little from that of dry plates. Expose about seven times as long as a medium plate, develop for considerable density when viewed by transmitted light, therefore very much darker than for a bromide positive. This is an all-important point, or failure will result.

Printing may be done from the negative just as it is, or the paper may be rendered transparent by the hundred and one formulæ which have been given for this purpose. Of these, so far as I have tested them, castor oil, carefully rubbed in, appears to be the best; but to obtain equal transparency is not easy, and I prefer to leave them as they are and put up with the resulting lengthening of the printing process, which, for those who use velox or other developing papers, is of little consequence.

So far, I have only spoken of paper negatives in reference to the primary exposure, but there is another and more valuable use for them in the production of enlarged negatives. That prints made from the latter are better than bromide enlargements has never been denied, and their lack of popularity is



THE DIFFERENCE BETWEEN THESE PRINTS IS ESSENTIATED BY THE HALF-TONE PROCESS



solely due to the trouble of producing them. Now, say that we would make a 11×14 from 4×5 negative; there are several ways of proceeding; we can make a small contact transparency and enlarge that on to a 11×14 negative, or we can make an 11×14 transparency and from that make a contact negative. It is generally agreed that the latter is the better method; but if this be done with dry plates it involves the use of two large plates, an expensive procedure. Moreover it is not an easy matter to obtain perfect contact between two large plates. For this reason, Sir Wm. Abney, one of the best technical experts living, has recently written that in the production of enlarged negatives one of the steps should always be a paper print. If we accept this, we may either enlarge on to bromide paper (developing strongly), retouch the resulting positive and print it on to a dry plate or on another piece of bromide or other paper, or it may be printed in carbon, and transferred to glass or transparent celluloid, which will yield a reversed negative—just the right thing for a carbon worker.

If from a bromide enlargement a paper negative be made by contact, we have the cheapest and simplest procedure. What are its disadvantages? The only ones I have been able to observe is a tendency to hardness in the final print. To my mind the use of paper for both transparency and final negative is quite practicable, is the cheapest procedure, and allows of the greatest liberty in modifying the results of the primary exposure. In connection with gum-bichromate printing it is quite workable.

If, as is usually the case, softness is a desideratum, then it will be better to make the final negative by the carbon process. I have thus reproduced negatives which in softness and detail are indistinguishable from the original. I find that transparency black is not necessary for this purpose, if the print be slightly intensified by a permanganate bath; the deposited oxide of manganese is quite non-actinic. These carbon negatives should always be made on transparent celluloid; they can then be printed from either side. Still another method of procedure is to make a large transparency on a dry plate and from this make a negative on a printing-out paper, platinum, solio or albumen. If this be done, do not tone; the red color is non-actinic. Abney recommends albumen paper for this purpose. I have obtained quite good results with solio, but we must not forget that silver prints fade, and from this standpoint platinum is preferable, though it is not so easily controlled in printing. I have only touched on the fringe of a large subject, but the work I have done has convinced me that amateurs are neglecting a good thing. Paper negatives, direct or enlarged, are cheap, light, easily modified and easily stored, and are worth more attention than is usually given them.

FORMALDEHYDE IN TONING

The editor of the *Photo-American* gives some interesting notes on the use of formaline in the toning bath. We were familiar with its use as a toughener of the gelatine, but Mr. Todd found that it acted as an accelerator of the toning and yielded black tones. The formula given consists of two grains of gold to a quart of water, to which one dram of formaline is added.



BY ROBERT CRAIK MC LEAN

LIKE AN ARMY WITH BANNERS

THE ELEMENTS OF PHOTOGRAPHIC EXPOSURE

BY F. M. STEADMAN
IN THREE PAPERS—THIRD PAPER.

Even as photography is most commonly applied to portraiture and landscapes, there is not one of its processes that is placed on a fundamental and studiable basis. As to the sensibility of plates and films, each factory makes the most sensitive brand, according to their individual announcements, and the different speeds and classes are marked with any special name or number that suits their fancy. The only guide to their speed is experience in using them.

In the matter of diaphragms, the "f" system, while it is sufficiently correct for practical use in marking lenses of moderate illumination, is deceptive indeed when applied to those of large diaphragm capacity. The system, in my estimation, is founded on an erroneous idea of space. I believe that the following proposition is true:

An opening having double the area of another cannot admit to a point opposite its center double the amount of light, other things being equal. With regard to counting time, there are automatic shutters on the market, and I think all will agree that there never was one that exposed as it was marked, or that always exposed the same at the same mark; nor were there ever two of the same make that exposed exactly alike. Continued experience with a certain shutter alone can give the key to its exact capacity. With the proper method of counting and a very little practice one can count eighths, fourths, and half seconds with great accuracy. This must be done with the "B" or bulb release, but the shutter must be so constructed that the blades close instantly the hand is released and not "hang fire" an eighth to a quarter of a second, as do one or two of the favorite shutters now on the market. One must learn to think time mathematically, and do his own measuring.

When the question of light and its action upon surfaces is considered, we find along scientific lines plenty that is interesting and instructive. But when these same scientists have tried to be of practical service to the world of confused beginners in photography, they have only succeeded in complicating matters. In arranging their exposure tables they have taken the strength of sun and sky as a basis, and have not only "beaten around the bush" but through a whole bewildering forest, or, better said, they have entered the forest, but not one of them has ever succeeded in getting out again.

As the reader well knows, they ask us to consider the latitude from the equator, the month of the year and the hour of the day. They figure it all out, and by taking the height of the sun above the horizon at these different latitudes, months and hours, they give us a different table for each latitude. I never yet saw a table for the Arctic zone, so am justified in saying that they have not as yet come out of the woods.

What can we think of those well-meaning people who stand up and boldly tell us: "Here is a little instrument or table which you can carry in your pocket, and which will serve you instead of knowledge!" Now, if the height of the sun in degrees directly above the horizon is the key to its intensity and to that of the atmosphere, why did they not select a certain height for a normal force and arrange a scale of values for the higher and lower points?

With that system in hand, one could go from the equator to the poles, and in any month and at any time of day know the power of the light; but would have to judge how much it was influenced by the condition of the atmosphere, altitude, humidity, temperature and subject, even with their complicated tables.

The work of science is to simplify, not to confuse.

With respect to the development of negatives and the measurement of their translucency, it is the same — nothing is done to place it on a basis. It is just as reasonable that one should measure a negative as to its scale of translucency as to know its length and breadth.

With regard to the scale of negative translucencies that different photographic papers can receive and properly register, a capacity of basic importance in the making of negatives for different papers, nothing whatever is arranged scientifically, although in practice its importance is recognized, as witness the difference between the "capacity" of a negative for "blue label aristo" and one for "aristo platino" paper. Every photographic paper made should be sent from the factory with a mark on it, such mark being the scientific measure

of the translucency of a negative with which that special paper will furnish the full scale from white, with detail, to an agreeable shadow depth.

A few words in closing as to the future of photography as a process and of the art that it has revealed. The analysis of a subject under light is an art as yet undeveloped, and when one is in possession of the laws of nature that rule over the realm of light, surfaces and optics, he is then only ready to begin to study the still finer art of portraiture; finer because it is purely a creative art. (I do not refer to *reproduction* in any form, but to the *production* of the actinic scale over a face or other subject.)

The growth of this art, which I consider to be the proper foundation of the



BY MRS. A. C. WITHROW

A CUP OF TEA

study of all art, being simply a higher eye education, is based on the scientific study of nature, and the growth of art in the world along every line, including sculpture and architecture, especially as to the construction of home and school buildings will be influenced by this study in some such way as the knowledge

and the use of music have permeated the world by reason of the scientific arrangement of its truths.

So far as photography as a process is concerned, it is a good servant. It has been generally in disgrace because its ignorant masters have commanded it to do the impossible, and it could not. It has been broadly and commonly useful in the world because it has been commanded to do, and has done, the ordinary. And it has also risen to great respect because it has been employed by great masters — has been commanded to do great and beautiful things, and has obeyed.

The art of photography, so called, is in reality the art of analyzing, selecting or creating the conditions that are to be photographed, but which may just as well be analyzed, selected or created for the purpose of practice in the art of doing it, or in the arrangement of models from which to sketch or paint. It is a new art. The world's great artists have come near to it, and in love and devotion have made each their soulful interpretations; but as to understanding its mysteries, none of them have ever claimed.

This new art is founded on a new science, and the process of photography, which is but the servant of them both, will be forever honored, because it has revealed them to the world, and will ever continue to faithfully serve them.

Josiah Johnson Hawes died at a summer resort in New Hampshire on August 10th. Mr. Hawes is supposed to have been the oldest photographer in the United States, being in his ninety-fourth year at the time of his death. He is said to have built the first skylight for photographic purposes in America. In his studio the first camera picture of Daniel Webster was made on the morning when the famous Anthony Burns speech was delivered from the balcony of the Revere House. Jenny Lind and Goldschmidt, whom she afterwards married, were photographed by Mr. Hawes; also Oliver Wendell Holmes, Theodore Parker, Emerson, Thomas Starr King, Longfellow, Whittier, Louis Kossuth and Baron Rothschild.



THE STUDENT

Exposure made six feet from small north garret window before sunrise in morning. Source of light was probably about one-half each, lamp and daylight. Shutter opened by autopoze and closed by self after about one and one-half minutes exposure at f.8. Lamp much halated, printed about twice as long as other parts.

TELE-PHOTOGRAPHY OUTDOORS

BY THEO. KITKA

ILLUSTRATED BY THE WRITER

In response to many inquiries regarding the cause of defective tele-photographic negatives, the writer was induced to give this brief account of his practical experience in this branch of photography, hoping thereby to aid the amateur as well as the professional in his efforts in this line.

Technical terms are omitted as much as possible, knowing how much the average amateur dislikes to wrestle with technical problems, and a simple explanation of the working data is herewith given.

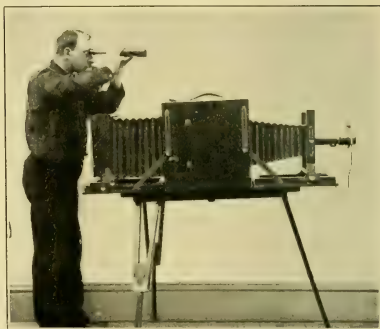
To those deeply interested in tele-photography the writer recommends the books published on this subject by T. R. Dallmeyer, Carl Zeiss, R. and J. Beck and John A. Tennant.

Tele-photography is the name applied to the art of taking pictures, on an enlarged scale, of distant objects, with comparatively short camera bellows extension.

The necessary apparatus for this class of photography is a first-class lens, such as a Zeiss Convertible, Collinear, Goerz Double Anastigmat, Planar, Steinheil's Aplanat, or any lens having a faultless covering, defining and illum-

inating power. Any of these may be adjusted to a tele-tube containing a negative lens system, which displaces the initial point of the focal length of the combination to a point considerably in front of the ordinary lens. These tele-attachments for certain makes of lenses are now on the market; however, any good lens may be specially fitted by the manufacturers to a tele-attachment having rack and pinion in the tele-tube and indicating the diameter of enlargement.

In order to secure a great magnification, the camera should contain a certain length of bellows. (See accompanying table for length



COMPARING FOCUS WITH POWERFUL BINOCULAR
TELE-PHOTO CAMERA AND TRIPOD DESIGNED BY THE
WRITER FOR OUTDOOR PHOTOGRAPHY



TELE-PHOTO NEGATIVE OF THE ART INSTITUTE TAKEN FROM THE
PARROTT BUILDING. DISTANCE BETWEEN CAMERA AND THE ART
INSTITUTE, EIGHT BLOCKS

of bellows required for various enlargements.) There are also small attachments made for hand cameras, requiring but a very short bellows extension, which enlarge up to four diameters. The lens manufacturers supply tables showing the length of bellows required by various combinations for certain magnification. The tele-photo lens for an 8×10 or 11×14 plate is quite weighty, and if the front board of the camera is not strong enough to support the weight of the lens, this will cause vibration and pull the front board out of perpendicular. The writer uses a brass rod to support the weight of the B. and L. tele-lens, in addition to a strong front board. (See cut of camera.) In this respect a tele-photo attachment having the flange adjusted in the middle of the

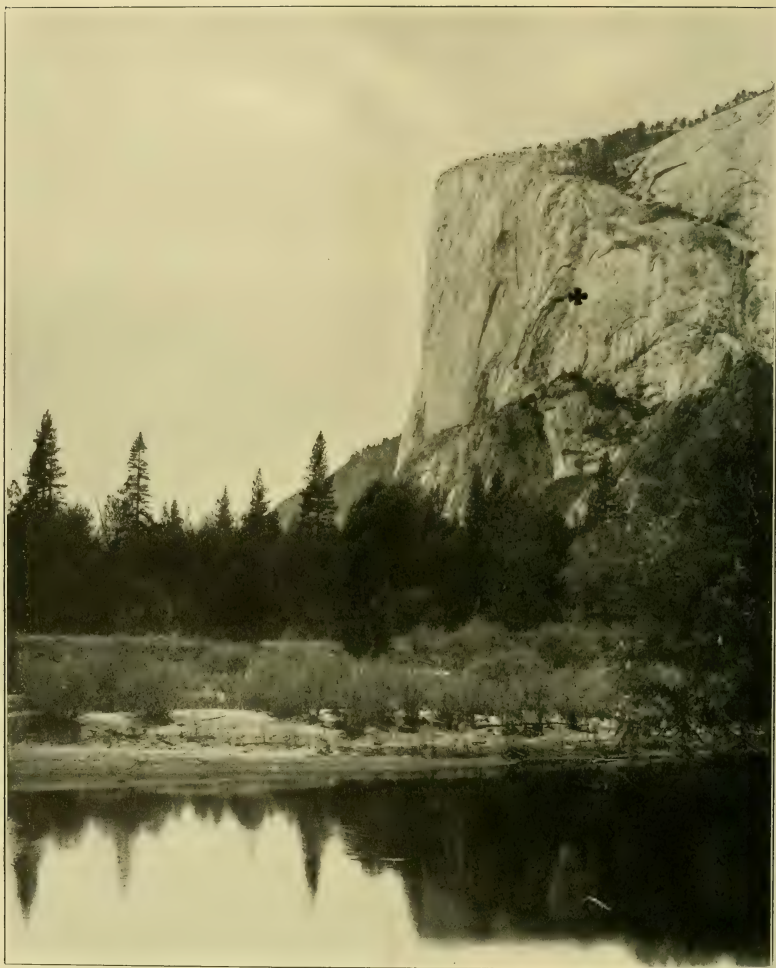


NEGATIVE SHOWING THE ART INSTITUTE TAKEN FROM THE PARROTT BUILDING. MADE WITH 8×10 ZEISS
 CONVERTIBLE LENS WITHOUT TELE-ATTACHMENT
 BLACK SQUARE SHOWS PORTION CAUGHT BY THE TELE-LENS. DISTANCE EIGHT BLOCKS

tele-tube is superior, as it offers less strain to the front board. Another advantage of this attachment is that the negative lens may be replaced with a moderate or high-power lens at will.

A strong tripod is absolutely necessary. After many experiments and failures, the writer designed a tripod for mountain photography that answers the purpose admirably. The illustration shows the tripod contains a double bed for the camera, revolving on a pivot; thereby the camera may be swung to the right or left, or, if necessary, it may be completely turned around, without disturbing the position of the tripod or separating the camera from it.

Firmness and absolute rigidity are necessary for the production of good results, and here photographers will encounter many difficulties not found or noticed in ordinary field work.



ORDINARY PRINT FROM 8 X 10 NEGATIVE OF EL CAPITAN MADE WITH CONVERTIBLE LENS. THE CROSS MARKS THE CREVICE IN WHICH THE TREE SHOWN IN THE OPPOSITE PICTURE IS LOCATED



NEGATIVE OF A TREE IN A CREVICE ON EL CAPITAN. MADE WITH ZEISS CONVERTIBLE LENS AND TELE-
ATTACHMENT. THREE SECONDS. F.16. ORTHOCHROMATIC PLATE. 9 A.M.. FROM SAME DISTANCE

The exposures at times are quite prolonged, and atmospheric conditions, such as wind, even a gentle breeze, or swaying of trees, are to be considered; and again, a hot, sultry day will make the intervening space between the camera and the distant object appear "boiling," a sort of moving ether which is fatal to good results. The writer has found by experience that in this class of work on the Pacific Coast he met with most success in the spring and fall months, between the hours of six and nine in the morning and five and six in the evening, particularly after rain, which clears the atmosphere of dust, smoke or haze.

Almost all workers in tele-photography prefer the medium orthochromatic plate, although for a certain class of work the standard make of plates gives satisfaction. The plates should be "backed" to obtain first-class results.

The beginner will find the focusing attended with some difficulties, which, however, can be overcome with a little perseverance and judgment.

The camera bellows is extended to receive the enlarged image on the ground glass, and the tele-tube is screwed out to the mark indicating certain magnification; the fine focusing is done with the adjusting screw of the tele-attachment separating the elements of the system. The largest stop is used for focusing. For exposing, the writer uses stop No. 8 U. S., and rarely stop No. 16 U. S. At times the writer uses Carbutt's orthochromatic screens in the back of a B. and L. tele-attachment.

The greater the magnification, the less crisp will the image appear on the ground glass. It is but very seldom, and then with the best appliance at hand, that an enlargement may be made beyond ten diameters satisfactorily.

A good-sized focusing cloth and a focusing glass are necessary. The writer usually verifies the focus obtained on the ground glass with a powerful binocular. Unless the tripod and camera are absolutely rigid, high magnification will be attended with much trouble; and where the bellows are extended at times to five or six feet, the bare touching of the hand on the ground glass or focusing cloth will keep the picture trembling for a time, in addition to the wind disturbances. Experience will enable the photographer to obtain fine focus with the lever back of the plate holder.

The question of exposure is the most difficult to answer. As a rule, shorter exposures are necessary in photographing distant objects than would be expected, while longer exposures are necessary with the tele-lens than for lenses of ordinary construction of the same focal length when near objects are photographed, the increase of exposure being proportioned to the square of the distance between lens and object. The reader is referred to the accompanying illustration, which shows the stop, plate used and exposure given.

The development of a tele-photo negative must be made slowly; the tray should be covered during development, and only deep orange light is permissible. The development should be carried a trifle farther than for an ordinary negative. The resulting negative, even at best, will be, perhaps, a surprise to the novice. The usual contrast noticed in ordinary negatives will be lacking, owing to the great distances. We have not only to contend with lack of homogeneity in atmosphere, but also dust, smoke, haze and other atmospheric disturbances. To obtain contrast in this class of negatives, there is a good opportunity for using developers giving good printing qualities and contrast.

For intensifying, the Agfa Intensifier is highly recommended by its many users.

The prints from these negatives are decidedly pleasing, and the microscopical definition found in many ordinary pictures will not be missed.

The perspective is much improved in tele-photo pictures, owing to the length of focus of the objective employed.

The field of usefulness of tele-photography is certainly very great.

The naturalist records the habits and haunts of the animal kingdom.

The architect pictures the details of many architectural works heretofore impossible.

Various governments employ tele-photography in balloon, coast, naval work and warfare.

To the mountain climber and geologist it is very important.

Astronomers record their solar observations by this means. The application of the negative lens to large telescopes increases the focal length, and the astronomer is thus enabled to produce a large direct image.

In portraiture, tele-photography seems to take but a very slow hold on the operators, notwithstanding the improved perspective. The space required is not available in all studios, and, also, the length of exposure is somewhat of a detriment to the popularity of this class of photography, although the writer has seen some remarkable work done in portraiture and figure work by the tele-photo lens.

BAUSCH & LOMB TELE-TUBES							
DISTANCE FROM THE FRONT BOARD TO THE GROUND GLASS							
Size	Equiv- alent Focus of Photo Lens	Magnification Resulting Focus when used with Tele-Photo Attachment					
		3	4	5	6	7	8
Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
4 x 5	6½	6⅜	9⅜	12⅞	16⅞	19⅜	22⅞
5 x 8	8¼	8½	13	17½	22	26½	31
6½ x 8½	11½	10½	16½	22½	28½	34½	40½
8 x 10	13½	13½	20½	27½	34½	41½	48½

THE POST-GRADUATE

The days of the gelatine prints and "we-do-the-rest" photography are numbered. In the past three years the members of the craft have unconsciously formed a series of classes in the great school of photography, and the "Press-the-button" crowd find themselves members of the kindergarten. High-grade lenses, complicated speed shutters and cameras fitted with every conceivable scientific attachment are to be found in the high school, while the students in the post-graduate course should be entitled to an N.D. (Doctor of negatives), so little do their final results resemble the original proof of their work. The pen, brush, pencil, water colors, in fact, every medium used by the landscape painter, is pressed into service. One cannot help but wonder what the next few years will bring forth.

THE EDUCATIONAL CONVENTION AND ITS WORK

The National Convention of 1901 will hereafter be known as one of the historical sessions of the Photographers' Association of America. Differing from all previous conventions in that an effort was made to be educational instead of technical, and in the abandonment of the prize features, the result was, for a time, in doubt. But when the convention was called to order by President E. B. Core, the number of delegates and the enthusiasm shown by them demonstrated conclusively the truth of the prediction made by the first advocate of these changes.

In his address President Core alluded to the innovation, and paid especial attention to the art movement and its progress, closing with this strong bit of advice:

Study, gentlemen, and enjoy for yourselves the pleasure the old masters have given generations that have passed away. And while we see inspiration, and expect it, and thank the Ruler of the Universe for every other fellow's success, striving to make it our own, let us remember that it is hard work that tells; work, indomitable work; work that really counts in the long run, every time.

There are in this august assembly scores of self-made men, men who have succeeded, and are great today, whose names are known in every civilized land, all because they were not afraid to learn to work, and to work to learn.

And if some of you feel the pressure of grim necessity ever upon you, the need of earning cold money out of your toil, instead of seeking other apparently speedier ways to fame, let it not for one moment dishearten you; rather thank fortune that you feel that stern incentive to prove your metal, which has so often in the history of our country been the impelling motive to enterprise and labor on the part of men who are today recognized as great.

During the course of the convention addresses were made by the Hon. William C. Maybury, Mayor of Detroit; W. I. Scandlin, editor of *Anthony's Photographic Bulletin*; Pirie MacDonald of New York; W. M. Hollinger of New York; Professor A. H. Griffith of Detroit; Dundas Todd, editor of the *Photo-Beacon*; L. W. Hitchcock, and Milton B. Punnett of Lewiston, Me. At no time did the interest in these talks flag, and the educational spirit was strong in both the speakers and their hearers.

The most important business considered by the convention was the plan proposed by Mr. J. C. Strauss of St. Louis for a photographic building at the Louisiana Purchase Exposition to be held in St. Louis in 1903. A letter from President Francis of the Exposition Company was read promising his co-operation. Mr. Frank Hammer invited the convention to St. Louis in 1903, and promised that no time would be lost in securing the proposed action.

Buffalo was chosen as the next convention city, after a short, stiff fight by San Francisco. From the expressions in the convention hall the prediction is made that the convention will go to St. Louis in 1903, and to San Francisco in 1904.

The following officers were elected to serve for 1902: George M. Edmondson of Cleveland, president; George Nussbaumer, Buffalo, first vice-president; W. H. Klein, Milwaukee, second vice-president; and C. R. Reeves, Anderson, Md., secretary. The only contest was for the office of first vice-president. The contestants were Frank Schumacher of Los Angeles, Klein of Milwaukee, and

Nussbaumer of Buffalo. Schumacher tried to withdraw, but was forced to run. His vote was very complimentary.

The social features of the convention were very pleasant. Two trips in an immense steamer were given by the General Aristo Company, who entertained their guests with accustomed grace and thoroughness. A car ride around the city and a tally-ho ride for the ladies were among the many attractions Detroit had to offer.

The exhibition hall, although small, was attractive, the exhibitors vying with each other in their endeavors to attract the most attention.

The CAMERA CRAFT exhibit of big tree pictures by Howard C. Tibbitts was surrounded by throngs whose desire to see the living trees was fully as strong as their admiration of the pictures.

A pleasant feature of the closing day was the presentation of a magnificent clock to President Core as a testimonial from the convention.



CHARACTERISTIC CONVENTION PICTURES



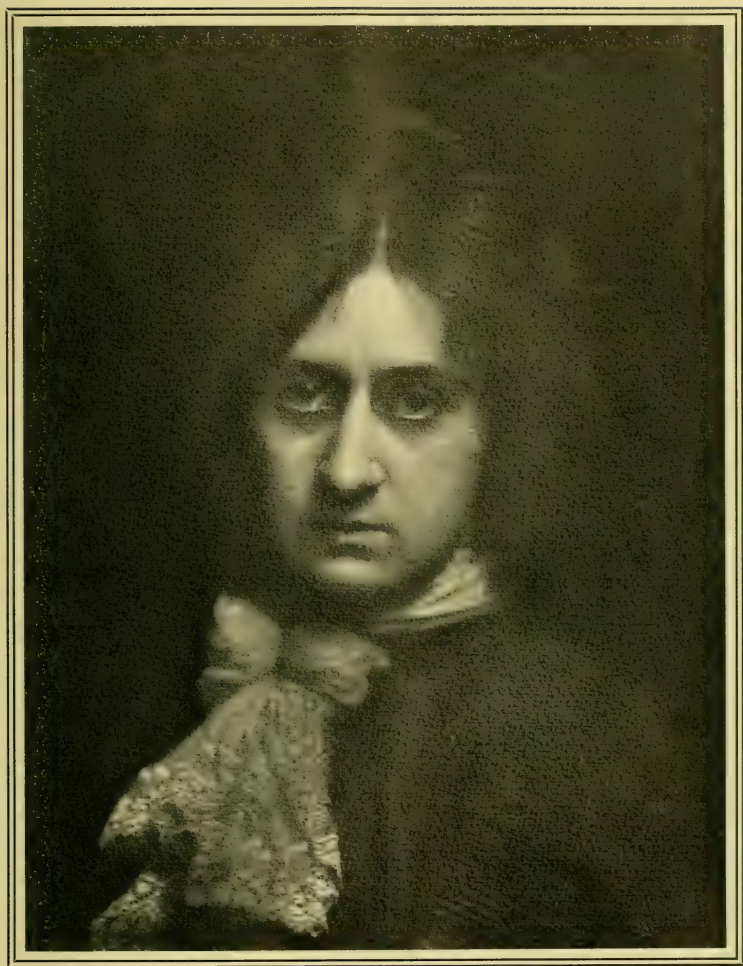
"CHILDREN"
by HOLLINGER, NEW YORK CITY



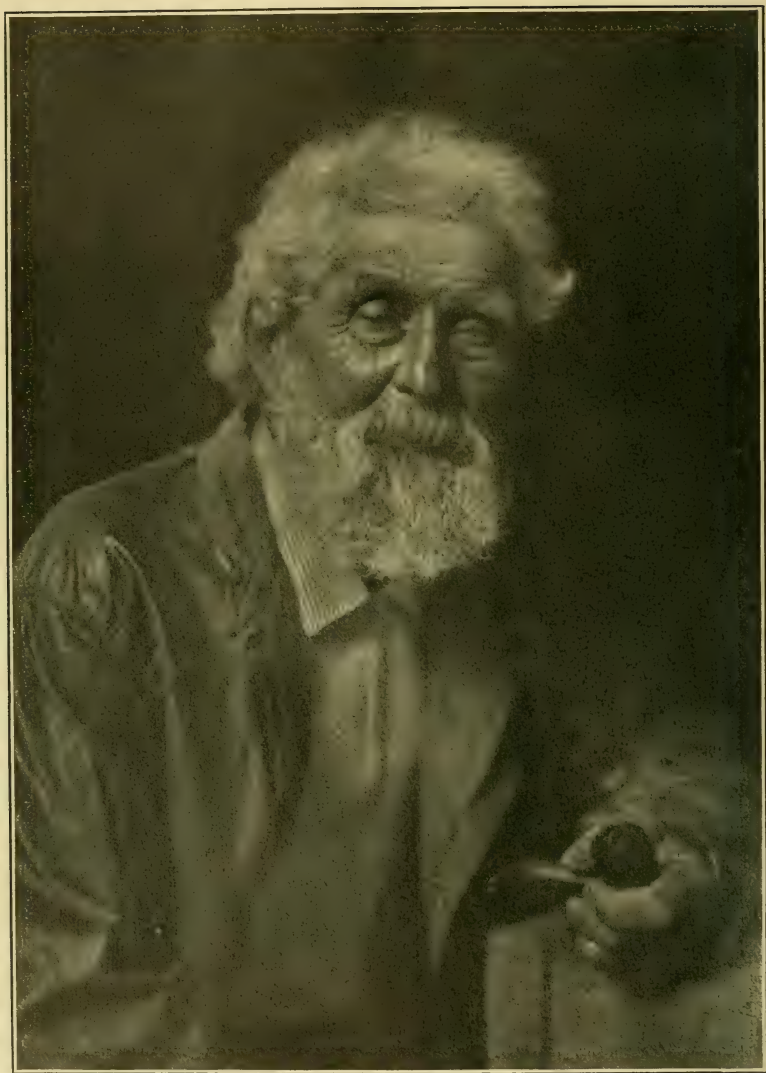
PORTRAIT
by PIRIE MACDONALD, NEW YORK



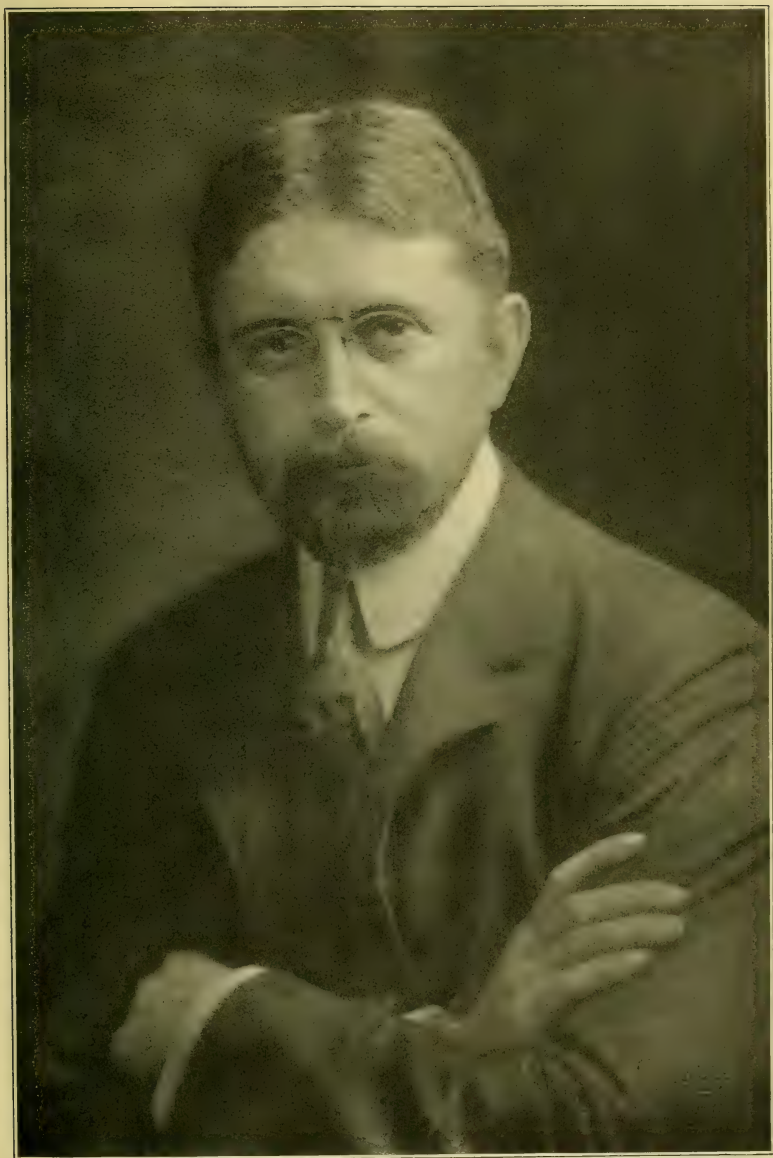
ALONE WITH HIS MAKER
by BAKER STUDIO, COLUMBUS, OHIO
(Copyrighted)



PORTRAIT
by STEIN, MILWAUKEE



AN OLD SALT
by CHARLES W. HEARN
(Lens and Brush Club Exhibit)



PORTRAIT
by ELIAS GOLDENSKY

THE CONVENTION PICTURES AND THEIR INFLUENCE

BY PIRIE MACDONALD

The size of the paid-up membership roll was, for many years, the gauge by which the success of the National Convention was measured. The bigness of the picture show was another factor, and the quality of the technique took third place, with little or no regard to expression of the worker in lines artistic, except as they were bounded, and very strictly, by the accepted standards.

The Detroit Convention, numerically, was a pronounced success, and the show was big enough, in all conscience.

But a fight is on.

The change of scheme from prizes to free for all, indiscriminate hanging and no awards, was calculated, I have reason to believe, to bring out the one piece from the little fellow, who had made it with a full heart—the one thing of the year that he believed to be an evidence of his strength; that there would be hundreds of them; that men who could not afford to send them by express would bring them under their coats—tenderly and lovingly—to deposit their mite on the altar.

But it did not work.

People who had hitherto shown for prizes, with few exceptions, did not show at all. Those of them who did, sent their pictures in a most perfunctory manner, as a duty rather than a pleasure. For the most part, the new men were of the class who make, not necessarily what they think is good, but what they think demonstrates *their* independence of other people's opinion—not striving to portray their subjects in the most noble and gracious moods, but rather to show off the handiwork of the workman, throwing aside ruthlessly not only what is stilted and affected and faulty in the old way of handling, but what has, by centuries of sober thought and trial and the natural winnowing of time, proved to be good. Not invariably, of course, for some of the newer men have struck chords that resound with charming effect as well as truth, and will have a broadening influence on the work of everyone who studied the show.

The ideal exhibit, to my mind, would be composed of a small number of pictures from each one of a large number of exhibitors. Only the work each man was proud of, and he understood so well that he could and would fight for it, should be shown.

A competent hanging committee, who would have power to reject work that did not demonstrate conception, would be another important factor in the ideal exhibition. Even one hundred pictures made and selected in this way would be worth the journey to see.

Then meetings for the discussion of the pictures should be held, each man, if he chose, explaining and defending his work. This, to me, would be the ideal educational convention.

President Core had an awful job on his hands when he took up the pioneer work of this year, and the convention, considered as a step into new and untried territory, will always be recognized as a brave move and a distinct success.



THE MCCLOUD RIVER FALLS, NEAR MT. SHASTA, CALIFORNIA



TIBBITTS, PHOTO

ON THE BANKS OF THE MC CLOUD RIVER

IN THE McCLOUD RIVER VALLEY

BY ELLA M. SEXTON

To throw across the printed page a gleam
Of country sunshine, and perchance to bring
To city ears the sound of brooks that sing
With birds and winds along this forest stream!

Oh, for such a gift of description, reader, that you might gain a glimpse of of the strange, delightful region first found fair by the canny Scotchman whose name it bears! There, in a few square miles dominated over by mighty Shasta's snowy pyramid, ribbed with living glaciers, are forests of giant sugar pine and firs. There are underground rivers flowing through hollow and honey-combed strata of lava and finally bursting out through some green hillside to swell the foaming torrent of the McCloud. There is at once a wet and a dry land where countless springs and snow-fed creeks cross roads deep in black volcanic sand and ashes, while everywhere in lava-dykes, ridges or caves, in the fragments of obsidian, in the red and gray masses of once-molten rock is proof positive of the time long ago when Shasta scattered fire and desolation far and wide.

Inquire about this country, and guidebooks and maps will show you only a crooked, black line dotted with towns from here to there. The better way is to arm yourself with a magic bit of pasteboard, step aboard the Southern Pacific Oregon Express, have a good dinner, then luxuriously close your eyes to wind and fog and the coast and open them to hot sunshine streaming down over the Upper Sacramento, a hurrying mountain stream dashing over great boulders in its canyon a hundred feet below. The pure, fresh smell of sun-warmed pines fills the golden air, as steadily flying northward we follow up this winding, brawling river almost to its source in the Big Springs not far from Sisson. We leave the train at Upton where the whirring mills and piles of lumber are eloquent of the town's one industry.

Here is a glorious view of snow-crowned Mt. Shasta and of a near-by curious volcanic cone called Muir's Peak or the Black Butte. Then by an odd "switch-back" railway we climb grade after grade and round hill after hill, always with a broader stretch of forest and purple mountains widening out before us till at last we reach McCloud's busy mills, logging trains and pretty homes. Let us not linger to watch the dead monarchs of Shasta's woods being carved into prosaic piles of lumber, but, taking a four-horse stage, hark merrily back to the forest primeval. A small part of it lies around the comfortable, wide-verandaed hotel, giving promise of rest and good cheer, which we drive up to in the sweet dusk of a summer's night.

"Here is peace, and balm for every wound," say we next morning as the dry, resinous breath of the pines distils under glorious sunshine, while the McCloud, a quiet, pretty stream, goes singing along, babbling perhaps of the green meadows a few miles above where it wells up out of the earth, ice-cold from its mother, the snowbanks of Mt. Shasta, kissed by that passionate lover, the sun.



TISBITTS PHOTO

WHERE THE RED DEER COME DOWN TO DRINK

CAMERA CRAFT

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VOL. III

SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1901

No. 5

A movement is on foot to erect a monument to Victor Prevost, who, through the researches of Mr. W. I. Scandlin, has recently been found to have been prominently identified with the early stages of photography.

Mr. J. C. Strauss of St. Louis has proposed to the photog-
THE ST. LOUIS raphers of America that a building, to be devoted solely to
EXPOSITION photography, be erected at the Louisiana Purchase Exposition,
to be held in St. Louis in 1903. The time is opportune,
the idea good and the outcome sure. Photography has reached a plane
peculiar to itself, and will hold its position so long as love of the beautiful
lingers in the mind of man. It is time, therefore, that national exhibitions
recognize this fact, and to Mr. Strauss is due the credit of calling the matter
to the attention of photographers and the management of the St. Louis
Exposition.

The Photographers' Association of America has taken the matter in hand,
and a committee will be appointed to confer with the exposition management.
Every photographer, whether professional or amateur, should assist the com-
mittee either by word or deed. It means much to photography and its future.

CAMERA CRAFT will follow the project in its every detail, and will lend
its aid wherever practicable.

*From present indications, the Chicago salon will be one of the most successful
ever held in the United States. Western photographers should be strongly repre-
sented. If you have not sent in your work, do so at once.*

GOUGING THE If the management of the St. Louis Exposition desires to call
AMATEUR to its assistance an army the advertising value of which is
exceeded only by the press, let it admit the amateur photog-
rapher free of charge. Buffalo has followed in the footsteps
of Chicago and Omaha, and the owner of a camera is "held up" for fifty cents
before he can make pictures on the grounds. The utter lack of foresight in
this abuse of corporation privileges is apparent after a moment's thought.
Where tens pay their toll, hundreds of amateur photographers from all over
the country would take their instruments to an exposition if they knew that

they would not be taxed. The advertising value of the pictures made by the amateurs today is recognized by all exposition managements. How much greater it would be if kodaks and small cameras were admitted free.

Those in charge of the concessions for the Louisiana Purchase Exposition would do well to consider this point before acting.

If a few of the Eastern photographic magazines would give more space to good, substantial matter, new formule, hints on developing, picture making, etc., and less to the troubles of the kodak company in England, we believe that the average photographer would read the journals with greater interest and profit to himself.

Last year, when the San Francisco salon was in process of formation, CAMERA CRAFT offered a series of beautiful medals as awards to the pictures of exceeding merit. This action was taken to stimulate the interest in the salon and served its purpose well. This year the salon needs nothing of the kind to induce the photographers of the world to exhibit. The salon is practically on a permanent basis, and nothing need be done but to let the photographers know the scope and character of the exhibition. This CAMERA CRAFT will do. There will be no prizes or awards this year, the acceptance of the picture being the only reward.

It has been suggested to CAMERA CRAFT that the restrictions as to unframed prints be removed, and that a separate display be made of unframed pictures. CAMERA CRAFT believes this to be a valuable suggestion. The number and frequency of Eastern exhibitions renders it necessary for the average photographer to exercise some discretion where framed pictures are to be displayed. The express charges to San Francisco are by no means light, and many amateurs hesitate at the rule which requires all prints to be framed or matted under glass. By all means accept unframed prints, even if a separate exhibit be made.

The Christmas edition of CAMERA CRAFT is being prepared. Last Christmas the special edition was exhausted within ten days after its publication. It will be well to order extra copies early this year, so that all may be supplied. The beauty and charm of the Christmas CAMERA CRAFT will be a surprise, even to subscribers.

THE
SCHLEY-SAMPSON
CONTROVERSY

The coming Court of Inquiry to investigate the charges made against Schley by Sampson might find their unpleasant task greatly simplified by the introduction of a few dozen bromide enlargements showing the exact position of the battleships during the destruction of the Spanish fleet at Santiago, on July 3, 1898.

According to the newspapers, it seems that the log of the Vixen has been tampered with and cannot be relied upon as correct. A few tele-photo prints would show whether the revised or the original log was right.

It is a well-known fact that there are more expert amateur photographers in the United States navy than in any other of Uncle Sam's military bodies. Was everybody too busy to press the button, or has some jolly bluejacket a set of negatives stowed away in his darkroom that might settle this controversy?

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK
CONDUCTED BY H. D'ARCY POWER, M. D.

NEW TONING METHODS

Mr. Matthew Wilson has described in the July number of the *British Journal of Photography* the results of a great many experiments with gold baths containing unusual salts. Results were obtained in some cases that promise useful and beautiful additions to the many existing toning processes. The two following baths are spoken of by the author as among the best:

PHOSPHO-BENZOATE-SULPHOCYANIDE BATH	
Sodium benzoate.....	60 grains
Sodium phosphate.....	75 grains
Ammonium sulphocyanide.....	38 grains
Gold chloride.....	1 grain
Water.....	15 ounces

The effect of this bath is to produce what the author calls dichroic toning. Speaking thereof he says: "Altogether the results of the experiments with this formula were the most satisfactory of any. The variety of tone exhibited by the prints in the finished condition contributed materially to the beauty of their appearance by helping to emphasize the more subtle contrasts of light and shade. Contrary to what might have been expected, the gradation of effect produced was well nigh perfect, notwithstanding the wide difference in color between the shadows and the highlights. There was nothing patchy in the appearance of the image, the warmer tones blending naturally with those of a colder description. In particular, the idea of atmosphere was admirably suggested by the delicate violet and blue-gray tones of those portions of the picture representing objects lying in and near the plane of the horizon.

BENZOATE-PHOSPHATE BATH

Sodium benzoate.....	15 grains
Sodium phosphate.....	25 grains
Gold chloride.....	0.66 grains
Water.....	5 ounces

"The prints, having been well washed, were transferred to the toning bath. The presence of a larger percentage than usual of the chloride of gold naturally tended to accelerate the progress of the operations. A fine purple tone of a crimson shade was obtained in the space of about five minutes. In seven minutes more a deeper, but still warm shade of purple was produced, the action of the bath having now become somewhat less energetic. An immersion of fifteen minutes was required to produce a cold purple tone,

which, in its turn, when five minutes more had elapsed, gave place to a grayish black. During the treatment of the prints in the bath there was no appearance whatever of stains or double toning, nor was there anything of the kind apparent during the subsequent operations.

"The prints were duly washed and fixed in a hyposulphite solution of the usual strength. In the first stages of the fixing process a certain loss in the intensity of the image was noticeable, but afterward the prints regained much of their former appearance. The quality of the tone was only—in some cases not at all—very slightly affected by the action of the bath. The proofs, in their finished state, were among the finest produced in the course of these experiments. The wide range of tone exhibited and its uniformly agreeable quality, together with the remarkable absence of local defects, were the chief features worthy of note."

CLOUDS IN CARBON PRINTING

As a carbon worker, I have had no end of trouble in printing in clouds, so that I feel sure that the following method, recently published in *Photography*, will be appreciated by my fellow-workers:

In ozotype, with its visible image, the difficulties are not quite so great, but even with it we have found it desirable to employ an artifice we first used with the older process. A description of the method, as applied in the ordinary carbon process, will simplify the instructions for ozotype.

Let the landscape print be made and developed in the ordinary way and allowed to dry thoroughly and harden. The cloud negative should then be fitted in a suitable frame, the landscape print may be placed behind it, the level of the horizon marked and masks adjusted. It is well, in addition, slightly to vignette the lower edge, so that no hard line shall be found. A print is now to be made upon a sheet of tissue for the clouds; the exposure should be distinctly on the side of under-exposure. The line of the horizon is marked on the back of the tissue, which is then squeegeed on the top of the finished landscape print. It is desirable that the lower edge of the tissue, where the print overlaps the landscape, should be trimmed at the last moment, as the action of the air and moisture on the exposed edge has a tendency to harden it, and a line might be found

difficult to remove by development. Development should take place at first with tepid water only, as the lightly printed image is easily dissolved.

When the general tone of the sky has been reached, the clouds overlapping upon the landscape—if such overlapping has taken place notwithstanding all care in vignetting—can be removed in one or two ways.

While the print lies in tepid water, a camel-hair mop may be used. As soon as the brush enters the water the hairs will spread out, and by bringing it gently in contact with the parts to be softened they are easily removed.

A better way, and one by which the tint overlapping masses of trees or buildings may be removed, is to make up a wash bottle with a tin can. Both tubes should be fitted with India-rubber tubes; that which is to be blown into may terminate with a fairly wide glass pipe, which can be gripped tightly between the lips. The other tube should end in a short length of glass tube brought to a fine point. The tin wash bottle may be filled with hot water, and may be stood conveniently over a spirit lamp or Bunsen burner. The print is then laid upon the usual zinc or ebonite plate, and the stream of hot water directed forcibly upon it. The distance of the print from the nozzle of the pipe will enable the water to be discharged either in broad, fine spray or in a thin stream. When the printing has been correctly performed, the spray need not be very hot. If over-exposure has taken place, necessitating the use of hotter water, it will be desirable to cork up lightly the aperture for the mouth tube and allow the water to be driven from the delivery tube by the force of the generating steam.

In the ozotype process the landscape print should be finished and the sky portion re-sensitized with a fine-pointed brush. In this way the sensitizing solution may be applied to all intricacies of the image. After printing, if it be found that the image does overlap, these portions may be painted out with a five or ten per cent solution of sodium sulphite, which dissolves the invisible image; or it may be left till after development, when it can be removed with the hot spray. The latter is probably the best procedure, as white junction lines are more unsightly and more difficult to deal with than slightly overlapping darks.

MOONLIGHT

Mr. James Craig, in a paper on "Art Photography" in the *Photo-American*, speaking of real and faked moonlight pictures, says: "It is merely a question of length of exposure, sensitiveness of plate and so on, to get a sunlight effect when the moon is shining, or, conversely, a moonlight effect by very short exposure when the sun is shining. I have heard an artist express as his opinion the absurdity of the latter proceeding; but, if he had been shown that moonlight differs

very little from immensely diminished sunlight, and that by gathering up moonlight for hours, or by cutting off sunlight at the hundredth of a second we get identical results, he would likely have admitted that there was nothing absurd in it." Nevertheless, with all respect to Mr. Craig, the artist was entirely right and he is wrong both in practice and theory. A genuine moonlight photograph is to the eye a quite different thing to the so-called moonlight effects, obtained by under-exposure against the sun. The peculiarity of moonlight views is the strength of the highlights and the opacity of the shadows, while the half-tones, in all parts not in shadow, are fully maintained. It may thus happen that the pictures may show gradation from deepest black to purest white and yet have opaque shadows. I have photographs taken by moonlight which show this perfectly. Faked moonlights, taken against the sun, if sufficiently under-exposed to give opaque shadows, exhibit a short scale of gradation and would not for a moment deceive a man used to the real thing. The theoretical assumption that sunlight and moonlight differ only in intensity is entirely wrong. Moonlight is reflected, not direct light, as is the sunlight, and differs spectroscopically from the latter. Moreover, the picture obtained by a four-hours' exposure under moonlight is spoiled as a picture by the constant shifting of the shadows that takes place as the moon travels across the sky. Not that there is any need for such an exposure, half an hour being usually sufficient with a full moon.

FLASHLIGHT POWDERS

In the *Photographic Times* Mr. Hitchcock has an article on flashlight powders, and gives his preference to the following:

Aluminum powder.....	2 parts
Magnesium powder.....	1 part

Of this mixture take two parts and add thereto powdered potassium chlorate five parts and powdered potassium permanganate one part. Mix without friction.

DE LUXE CALENDAR MOUNTS

A beautifully shaded and embossed calendar mount is being shown by the Eastern manufacturers.

The upper portion of the calendar is similar to the ever-ready mount, so that the photographer may insert any print he may choose.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

PHOTOGRAPHS FOR PUBLICATION

A correspondent wishes to know the quickest way to get a print from an exposed plate. Little

can be gained in development, but the use of metol, which brings out detail quickly, followed by pyro or hydroquinone to give density is advised. A fairly strong fixing bath will hasten matters, but if mixed fresh the chill should be taken off. A five minutes' wash under the tap will suffice after fixing if the negative is not to be kept.

Where permanency is desired, thorough washing can be given later. Alcohol is the best drying agent, but it is expensive and soon absorbs so much water as to be useless. Two minutes in a bath of alcohol followed by two more in a fresh bath will cause the negative to dry in a few minutes, particularly if fanned briskly. The second fresh bath is demanded because the water in the film dilutes the first. Five minutes immersion in a ten-percent solution of formalin will permit of heat being employed to accelerate the drying. The negative may be heated to the extent that the hand cannot hold it. Prints on bromide or the gas-light papers may be made from the wet negative, but more attention must be given to the washing, else the hypo left in the film will cause spots on the prints. The paper is soaked in water until limp, lightly squeezed to the film and the exposure made, no printing frame being required. The fixing takes but a few minutes; a short rinse, followed by vigorous use of the squeegee,

makes them ready for the two alcohol baths as advised for plates. They will then dry in a few seconds. Platino matt and glossy bromides are both suitable for reproduction if a blue tone be avoided. Prints should be forwarded flat, untrimmed and unmounted.

One of my readers in Ohio has PLATINUM been having trouble with the PRINTING development of his platinum paper. Not knowing just where his trouble is, and as he failed to send one of

the prints, it is hard to tell just what is wrong. Platinum paper requires a fairly strong negative for best results. Weak negatives give gray prints. Paper exposed to the air will absorb moisture and give prints inclined to flatness. The image will be much less distinct in printing. About thirty seconds is the right time required to develop a normal print from an average negative. The developer should not be allowed to become too cold or granular prints will result. The temperature should be between 60° to 80° Fahr. to secure the best results. If under printed, the temperature may be increased to 110° Fahr. to advantage. The scum which forms as development proceeds must be broken up or removed by skimming the surface with a piece of card, and the air bells



BY HENRY HALL, DONGAN HILLS, N. Y.

THE GEM OF THE JULY ALBUM

must be guarded against when immersing the prints. Use only chemically pure muriatic acid in the clearing bath; one ounce in sixty of water is about right. The prints should have at least three of these clearing baths, remaining five minutes in each. The last should show no trace of yellow stain.

Thirty minutes in running water completes the operation. The developer may be used repeatedly if fresh solution is occasionally added. This old solution must be kept in well-stoppered bottles, away from strong light, and be occasionally filtered. Store the paper in a cool, dry place. If the preservative in the bottom of the can becomes moist take it out, dry it over a fire on a shovel and return to the tube.

TESTING FOR ALKALINITY OF SODIUM SULPHITE

As I said a few months ago, it is next to impossible to secure a perfectly neutral sample of this salt. A correspondent wishes to know how he can best test his in order to judge of its neutrality. Dissolve four ounces of the salt in sixteen ounces of water, and then add sulphuric acid, drop by drop, until the solution no longer colors blue litmus paper red. If the sample is an exceptionally good one, but fifteen or twenty drops will be required. From this amount it runs up as high as two hundred or two hundred and fifty drops for samples that are very alkaline. These excessively alkaline samples should be rejected if one wishes good negatives or clear prints on developing papers.

I found a friend trying to focus a panel picture the other day that he wished to copy to a certain size, and he was having all kinds of trouble. When the focus was sharp the size was wrong, and when the size was right the focus was wrong, and he was about to give up in disgust. Remembering a hint I had read on the subject, I asked him to let me try a little. I started out by getting size and focus approximately correct. The picture to be copied was then allowed to remain permanently in its position and the focus obtained; not by the rack and pinion that moves the lens, but by sliding the whole camera. A focus obtained in this manner, the image on the ground glass was measured, and if a little too large, the lens was moved a trifle nearer the ground glass, and the process of focusing again gone through with by sliding the camera bodily toward or away from the picture. If the image is found too small the lens is brought further forward and the image again sharpened by this sliding of the camera. Only a few trials are necessary with this method, while with the rack and pinion plan, every alteration of the position of the lens alters the distance not

only between it and the copy, but the distance between it and the plate also. Just one trial of the two plans will convince any one of the superiority of the first method.

A correspondent asks how it is done. Ten per cent solutions of the following chemicals are mixed in the proportion of 75 minims copper, 570 of citrate, and 66 of ferricyanide solutions; but a better way is to mix as follows:

1 dr. copper sulphate in water to	1¼ ozs.
7 dr., 36 gr. potassic citrate in water to ...	9½ ozs.
53 gr. potassic ferricyanide in water to ...	1-10 ozs.

Mix the first two before adding the last. The solution does not stain, keeps well, and while of a green color, tones lantern slides and even bromide prints from purplish to red, according to the time of immersion. The only precaution that is necessary is the complete elimination of the hypo from the film. To this end complete fixing as well as thorough washing is demanded, if uneven action is to be avoided. The solution acts quickly; a warm black first appears, changing to a purple-brown in about thirty seconds. Following this, warm browns to cherry red are obtained in from two to four minutes. Twenty minutes' washing in running water completes the operation.

Sir William Crookes, in the journal of the Royal Astro-
nomical Society, tells how he
restored some faded star negatives several years old. The plates were first soaked for several hours in distilled water and then, in the dark, immersed from ten to fifteen minutes in a developer as follows: Water, 8 ounces; pyro, 24 grains; sodium metabisulphite, 24 grains; sodium carbonate (crystals), 288 grains; and sodium sulphite, 96 grains. The negative was well washed, fixed, and again well washed, six hours in running water being given in the last washing. They were then toned in gold. For this purpose an ounce each of a ten-grain-to-the-ounce solution of sulphocyanide of ammonia, and one of the same strength of gold chloride were taken and added to eight ounces of water. The plate soaked in this bath for ten minutes was washed in running water for half an hour, soaked in distilled water and then allowed to dry. The toning solution deposits gold on the image, blackening it and rendering it more permanent.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

THE PROFESSIONAL AND CONVENTIONS

Is it not strange that out here in California and especially in San Francisco, there has been no professional photographic society, much less a convention of any kind, while in many of the eastern states and territories they have been held regularly for many years past?

This thought came to my mind after reading an article in the July CAMERA CRAFT by Mr. Hicks, on the "Coming Convention of the Photographers' Association of the Pacific Northwest." This to me is an interesting bit of news, and I would advise all professionals who want to be up to date to read it.

The eastern journals are full of exhibition and convention information also. Among others is the Pennsylvania Convention, which held its fifth annual meeting at Reading. Philadelphia was selected as the meeting place next year. Business of great benefit to the protection and rights of the professional photographer was transacted.

The eleventh annual convention of the Photographers' Association of Iowa was held in Des Moines last June, with the largest attendance they have ever had. Among other good things was a demonstration in lighting by acknowledged experts. I am pretty sure that some of our San Francisco photographers are not suffering from an overplus of knowledge of this kind.

The Photographers' Association of Illinois held a very successful convention last May at Quincy, Ill., about one hundred photographers being present. One of the features of the convention was Victor E. George's lecture on retouching. It may be that some of our local retouchers are so full of the theory and technique of retouching that they do not need to go to a convention to learn more.

The first meeting of the Nebraska Photographers' Association was called to order on May 21st, and on the 22d the convention met in the Art Hall of the Nebraska University, the walls of which were covered by photographs greater in number than ever shown before in Nebraska. The Mayor of Lincoln delivered the address of welcome. The evening was devoted to an art lecture by Miss Hayden of the Nebraska Art School.

Last but not least comes the Oklahoma and Indian Territory Association. Their second annual convention will meet in Oklahoma City on October 1 and 2, 1891, at which time they say they shall be pleased to receive visitors, stock-house representatives, demonstrators of different plates and papers, and photographers and their exhibits from outside their borders.

With such an array of good examples before us, indicative of what some of the bright and progressive minds are doing in our own line of business, I think it is about time for the California professional to shake off his lethargy and do something if it is only to rub elbows with a fellow-worker. California, and especially San Francisco, has enjoyed for more than a quarter of a century a good reputation all over the world for the quality and style of its photographs, but I venture to say that if they do not get up and hustle they will find something missing some day, and that will be the realization of departed glory.

We surely have among us some earnest and bright men and women of the younger generation who have the will and intelligence to form an association and to hold highly interesting and instructive conventions. The amateurs and semi-amateurs have been doing commendable work in that line already.

I am sure that the pages of CAMERA CRAFT are open to all who have suggestions to offer that will tend to increase interest along these lines. I, for one, am willing to devote time and attention to the work, knowing full well that it will not be love's labor lost.

A NEW REDUCER

A writer in *Le Photogramme* advocates the use of an acid solution of potassium bichromate as a reducer. The formula given is for a stock solution:

Potassium bichromate.....	3 parts
Sulphuric acid conc.....	30 parts
Water.....	100 parts

This is diluted for use two hundred to a thousand times, the weaker solution being preferable for paper. Its action is like that of ammonium persulphate. It is to Dr. Elder that we are originally indebted for the process.

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS OF THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

The Salon Committee desire to emphasize the fact that the latest date that pictures will be received for the salon is September 9th. The time is short and already the Jury of Selection has a pile mountain high to select from. The north, south, east and west will be well represented. Contributions from abroad are coming in and the second salon is going to be a success, both from the number of pictures exhibited and the high grade of work that is being submitted. Each season shows vast improvement in the work of well-known exhibitors, and the society members are rapidly imbibing the spirit for artistic effect. The lens and the plates are now considered but mediums through which the idea and sympathetic appreciation of the beautiful is crystalized and recorded. The means has become secondary to the end attained. It has developed into the production of pictures, into studies of the artistic and picturesque—the recorded appreciation of Nature's open book that is ever a study and always new.

Read and re-read from the same location; new beauties unfold themselves with every change of the lights and shades—the sunshine of summer, the cold, crisp atmosphere of winter, the golden harvest and the spring song, each new and beautiful in its turn. To secure these and ably reproduce them for our own edification and the pleasure of others is becoming easier to the art student of photography. And the students are becoming more numerous each season.

Small clubs are forming for the more advanced studies, small in number but enthusiastic in the art in the production of the higher class of work that is the culmination of the nourished and cultivated artistic sensibilities.

"The Photo Fellows" is the latest organization of this character in Chicago and is composed of some of the best and most artistic workers in the city. This organization requires all applicants for membership to submit specimens of their work for examination. The prints must pass muster before the application is accepted.

This shows the trend of the study of photography—higher grade of productions, fellow

feeling and sympathy for the producing of the pictures. The mere technical side is secondary to the feeling expressed.

The past summer has been productive in the number of good things secured by members of the society, some of whom have traveled to the far north in search of pictures. The east, the west and south have all been visited, some even going as far as our new possessions. The Coast line of the west, the lakes and woods of the north, and the rivers and mountains of the east, have been paid homage.

The society season opens with nearly a full membership, and the greatest departure ever attempted by any photographic society in the way of a season of high-grade entertainment has opened with very flattering commendations from members and friends. The list includes a series of concerts and lectures from the Redpath Lyceum Bureau, which in itself is a sufficient assurance of an excellent list of events. A lecture by Mr. Robert J. Burdette, a concert by The Katherine Ridgeway Concert Company, a "Picture Play" by Mr. Alexander Black, the originator of this unique style of entertainment, The Whitney Mockridge Grand Concert Company, a lecture by F. Hopkinson Smith, together with a lecture by Rev. S. M. Johnson on "The Cathedrals of England," and Rev. R. A. White's lecture, "Marie Antoinette and the French Revolution," the "Story and Tragedy of an Unfortunate Life," form some of the prominent features of the coming season, which, of course, will include regular entertainments, demonstrations, lantern-slide exhibitions, and social features.

The opening of the second salon will be inaugurated with a reception that promises to be a brilliant affair and one that is looked forward to with a great deal of interest.

The Eastman Kodak Company has surprised the dealers with another attractive advertisement. This time it comes in the form of "a book of verse" entitled "The Witch of Kodakery." The pretty kodak girl seems to have moved many of the members of the craft to "drop into poetry," and they sing to her charms quite merrily.

CONVENTION NOTES

The Standard Dry Plate Company occupied one of the most attractive booths in the hall. The color scheme was red and green, and the photographic display, the only one made by a plate manufacturing concern, was very tastily arranged. Some of the portraits by the Albany Art Union were particularly noticeable, and Rush of Minneapolis was also very well represented. The exhibit was in charge of Mr. F. L. Leavitt, business manager, and Mr. F. M. Whipple, Western representative.

The most attractive display of frames and medallions in the convention hall was that of H. Davidson, 34 Union Square, New York. This exhibit was characterized by extreme taste in arrangement.

Among the exhibitors of frames at the convention hall was the Warner-Silver Manufacturing Company, 74-76 Superior Street, Chicago, Ill. Among the novelties were a line of gold-plated frames remarkable for excellence of design and taste of execution. The exhibition was in charge of Mr. John S. Park and Charles Warner.

The Lovell Dry Plate Manufacturing Company seemingly desired to make their friends and customers feel at home. No railing or other barrier separated the booth from the main hall, and the only exhibit arranged by them consisted of a number of good-looking attaches who exerted every effort to make visitors welcome. Unfortunately the print exhibit was lost in transportation, but the hospitality of those in charge compensated for the lack of display in this direction. Those in charge were Mr. Charles O. Lovell, manager, and Mr. John Pringle.

The exhibit of the Eastman Kodak Company was, as usual, characterized by extreme taste in arrangement and carefulness of detail. The pictures on the wall were from negatives by Marceau of New York and Los Angeles. One of the principal attractions was a handsome royal bromide of the "Kodak Girl" by Rudolph Eikemeyer, Jr. Mr. W. C. Duryea, assisted by H. W. Robertson and F. K. Hart, was in charge.

Mr. J. A. Smith represented J. H. Smith & Company of Chicago. The display consisted

principally of studio cameras and outfits. The new vignetter shown by this company was one of the few new things exhibited. This instrument, known as the "Globe," is easily attached and its simplicity of action commended itself greatly to the photographers.

The Excelsior matt cutting and card beveling machinery display was greatly appreciated by the photographers. The instruments are manufactured by D. T. McCall of Jackson, Mich.

One of the neatest and most attractive exhibits of pictures was that of the James Inglis Company of Chicago, Ill. Mr. George E. Inglis, manager of the company, is to be commended upon the taste in arrangement of the booth. A number of magnificent enlargements, from pictures by leading photographers, in various tones and tints were displayed to good effect against a dark background. This company makes a specialty of enlarging upon paper, porcelain and canvas, in black and white and in colors.

Messrs. Rough & Caldwell of 122 West 29th Street, New York, had a large exhibit of accessories and backgrounds to show the photographers.

One of the firms who exhibited new inventions was the Dorticus Manufacturing Company of 36-38 East 20th Street, New York, who displayed a combined half-tone finisher and mount-embossing machine which will undoubtedly be a popular accessory to the photographer's outfit.

The Rotograph Company's exhibit attracted much attention, the principal features being a number of tremendous enlargements and contact prints on Rotograph bromide. The new machine for bromide printing exhibited by this company is one of the simplest upon the market for this class of work. B. Russegger, assisted by J. C. Abel, editor of the *Bromide Monthly*, Thomas H. Chevalier, Wm. Neals and W. Downey, was in charge.

Burke & James of Chicago, Ill., were well represented, having on display a complete line of their specialties. Their new stereoscopic lanterns, trimmers, washing-boxes and ray filters attracted many of the dealers. Mr.

Burke, junior member of the firm, and Mr. G. W. Mackness made themselves well known for their hospitality.

Mr. A. J. Heinn of the Heinn Specialty Company, Milwaukee, appeared at the convention for one day.

A display particularly interesting to photographers and dealers was that of the T. B. Livingstone Company of Chicago, Ill. Their line of engraved, embossed and wooden frames was very complete. This exhibit was in charge of Mr. Livingstone in person, assisted by Mr. M. W. Benjamin.

The principal feature of the Bausch & Lomb exhibit was a portrait ninety-six inches in length. The photograph was printed from the largest portrait negative ever made. The lens was a Bausch & Lomb-Zeiss Anastigmat, series 5. Another attractive feature of this exhibit was a series of pictures awarded prizes in the Plastigmat contest recently mentioned in CAMERA CRAFT. This display was in the charge of Mr. Joseph Hammele and Mr. W. V. Moore.

The exhibit of C. P. Goerz consisted of a number of magnificent pictures showing the adaptability of their lenses to all classes of work. Mr. F. G. Burgess presided at this booth.

Mr. L. H. Cohen of New York had on exhibition a complete line of metal frames, the display being in charge of Mr. W. Goldsmith.

The booth of the Hammer Dry Plate Company of St. Louis, Mo., was the most artistic in the exhibition hall. It was finished in green and white, no attempt being made at photographic display. Mr. Hammer in person attended the convention, and was seen frequently at the booth.

Two new instruments shown by the Manhattan Optical Company were the long-focus, wide-angle Wizard, front and back focus, and the front and back Wizard view box. Both of these instruments contain many improvements. The exhibit was in charge of Mr. E. J. Carbrey, who is well known in photographic circles on the Pacific Coast.

The exhibit of the Reflex Camera Company, Yonkers, N. Y., was in charge of Mr. Curt S. Gottheil. Besides a complete line of cameras and focal plane cameras, there were a number of photographs showing the adaptability of the camera to high-speed work. Copies of these pictures can be had by mentioning CAMERA CRAFT.

Messrs. Carl Ernst & Company of 154 East 23d Street, New York, had on exhibition a large and very complete line of late novelties in both professional and amateur card mounts.

The new negative paper shown by Rotograph at the convention will interest every amateur photographer who reads Dr. Power's article. Samples of the work will be sent by the Rotograph Company if CAMERA CRAFT is mentioned.

The A. M. Collins Manufacturing Company exhibited an exclusive line of new mounts, many of them showing originality and artistic taste.

The exhibit of Mr. M. Buehler, representing the H. Lieber Company of Indianapolis was a source of great interest.

The booth of the M. A. Seed Dry Plate Company was finished in red, black and yellow. No pictures were exhibited, the booth being designed simply for a reception-room for friends and photographers.

The Taprell-Loomis Company of Chicago, manufacturers of mounts, displayed a novel line of embossed mounts, the new olive brown shade being particularly attractive.

Mr. Carl M. Fishel and Thomas B. Penton, Jr., represented Fishel, Nessler & Co. Their line of easel frames was the largest and most complete exhibited.

The exhibit of M. M. Frey of New York was in charge of Mr. Frey in person. The new cloth mounts formed a feature of the exhibit that was very attractive. The gold and silver ovals were also greatly appreciated. Samples can be obtained by addressing the manufacturers at 320 Broadway, and mentioning CAMERA CRAFT.

The G. Cramer Dry Plate Company had one of the most attractive booths on the floor. It was filled with comfortable chairs and served as a convenient resting place for the tired photographers.

Mr. Albert Wunderlich was in charge of the Ralph J. Golsen exhibit, which was complete and varied. Their display of lenses, over two hundred and fifty in number, was very pleasing.

At the convention it became generally known that Mr. L. W. Seavey, the well-known manufacturer of backgrounds, had passed away on June 18th. He was for many years identified with the Association, and was

personally known to nearly all the photographers of the United States. The exhibit of the executors at the convention hall was daily thronged by admirers of the late Mr. Seavey, who expressed their deep sorrow at his demise. Although none of the individual work of Mr. Seavey was displayed, the standard of former years was fully kept up, many artistic and tasteful designs being shown. This display was in charge of Mr. Chas. W. Trembley, who has, for the past fifteen years, acted in the capacity of business manager for Mr. Seavey, and who will conduct affairs for the executors in the future.

The exhibit of the Angelo Paper Company of Boston, Mass., occupied a portion of the Anthony Company's booth, and was in charge of Mr. Joe Di Nunzio in person. A large number of the prints were from negatives by prominent photographers, and, artistically arranged on a neutral background, formed an interesting feature of the exhibit.

Mrs. Fitzgibbon Clark and Miss E. C. Weber, of the *St. Louis and Canadian Photographer*, were at the convention.

Mr. and Mrs. Bissell, of the Illinois College of Photography, attended the convention, accompanied by about thirty-five students.

The exhibit of the Monarch Paper Company, of which E. and H. T. Anthony & Co., 122-24 Fifth Avenue, New York, are trade agents, was most artistic. An immense green plush background was covered with portraits of great excellence, showing the various qual-

ities of the paper. A special feature of the exhibit was a magnificent hand-carved trademark, an emblem that will undoubtedly be made familiar to photographers within the next few years. In attendance at this display were Mr. H. F. Hoefle and Mr. Stanbury.

A gem among the many displayed upon the convention hall walls was a miniature shown by the E. F. Foley Company, manufacturers of gold frames, which occupied a choice position in the exhibit. The picture was an exquisite hand-painted miniature on porcelain, so delicate that the attention of nearly every visitor was drawn to it.

Quite a number of Western photographers were represented in the General Aristo Company's exhibit this year. Among the prominent workers were Vaughan & Keith and Habenicht of San Francisco, Steckel of Los Angeles and Webster of Oakland. The exhibit this year far surpassed that of any preceding convention, and was in charge of C. S. Abbott, Thos. Pattison, C. L. Weed, Frank Hatzlett, Herman Arnold, Frank Doyle, and Messrs. H. M. Fell, Rice, Smith, Cornish, Barbeau, Krauss and Schaefer.

The Aristo School of Instruction, in charge of Mr. H. M. Fell, was packed at every session. Most of the time was given to demonstrations on the new product, collo-dio-carbon, but all who sought information on other subjects were well taken care of by Mr. Fell's assistants.

BUSINESS NOTES

F. L. Schafuss & Co., the New York manufacturers of photographic albums, have largely increased their line for the fall and winter demand. Among the novelties presented by this firm are The Royal Flexible Albums and The Royal Interchangeable Leaf Albums. They also make a line of calendar mats which should prove active sellers. Dealers will do well to send for their new illustrated price list.

The banquet tendered Mr. Ernest Cramer by the Pacific Coast Photo Dealers' Association at the Poodle Dog in San Francisco, on Monday, August 5th, proved one of the most delightful occasions in the history of the association. The menu contained every delicacy of the season, and the after-dinner

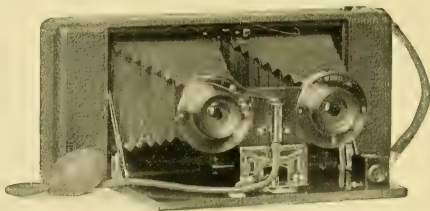
speeches were of the informal and heartfelt nature that must have proven flattering to the guest of the evening.

The firms represented were: C. Magagnos, of Alameda, Cal.; Holden Drug Company, of Stockton, Cal.; J. Fernald, of Alameda, Cal.; G. H. Armes, of Oakland, Cal.; Hirsch & Kaiser, Stuparich Manufacturing Company, No Per Centage Drug Company, B. Y. Morris, H. S. Schillcock, W. H. Hartter, Vulicevich Bros. and Kirk, Geary & Co., all of San Francisco. Mr. Peter Stuparich's speech of congratulations to Mr. Cramer on his recent marriage was the hit of the evening.

William Wolff, representing Hirsch & Kaiser, has started out on his annual fall trip.

The beauty of photography

CAN ONLY BE FULLY APPRECIATED BY STEREOSCOPIC EFFECTS



The Stereo Weno Hawk-Eye

uses regular $3\frac{1}{4} \times 4\frac{1}{4}$ cartridge film, is fitted with double rapid rectilinear lenses accurately matched and centered so that the exact perspective is obtained. The shutter is a double pneumatic iris diaphragm, is always set and operated by bulb or finger release. A complete stereoscopic outfit of the highest type in pocket form. Price, complete, \$25.00.

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*We carry a complete line of films and
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Free to those seeking employment.

Three lines, one insertion, 50c. Three insertions \$1.00.

Young lady, good printer and toner, also develops and copies, wishes position. State hours and pay. M. B., P. O. box 802, Fresno, Cal. References.

Open for engagement August 20th. Strictly A1 operator and retoucher; competent platinum paper worker; proficient in general studio work. Only high-class studios, able to pay good man. Address, C. E. W., care Standard Dry Plate Co., 35 Randolph Street, Chicago.

A strictly first-class retoucher, negative etcher, and stippler, who can also operate and assist with most work in studio, desires engagement about September 1st, or would like to rent furnished studio of moderate size. Address Claes F. Ericsson, 56 West Second South Street, Salt Lake City, Utah.

For Sale—One of the leading galleries in San Francisco, Market Street location. Fine opportunity for first-class man. Address J. T. B., care of Kirk, Geary & Co., 220 Sutter Street.

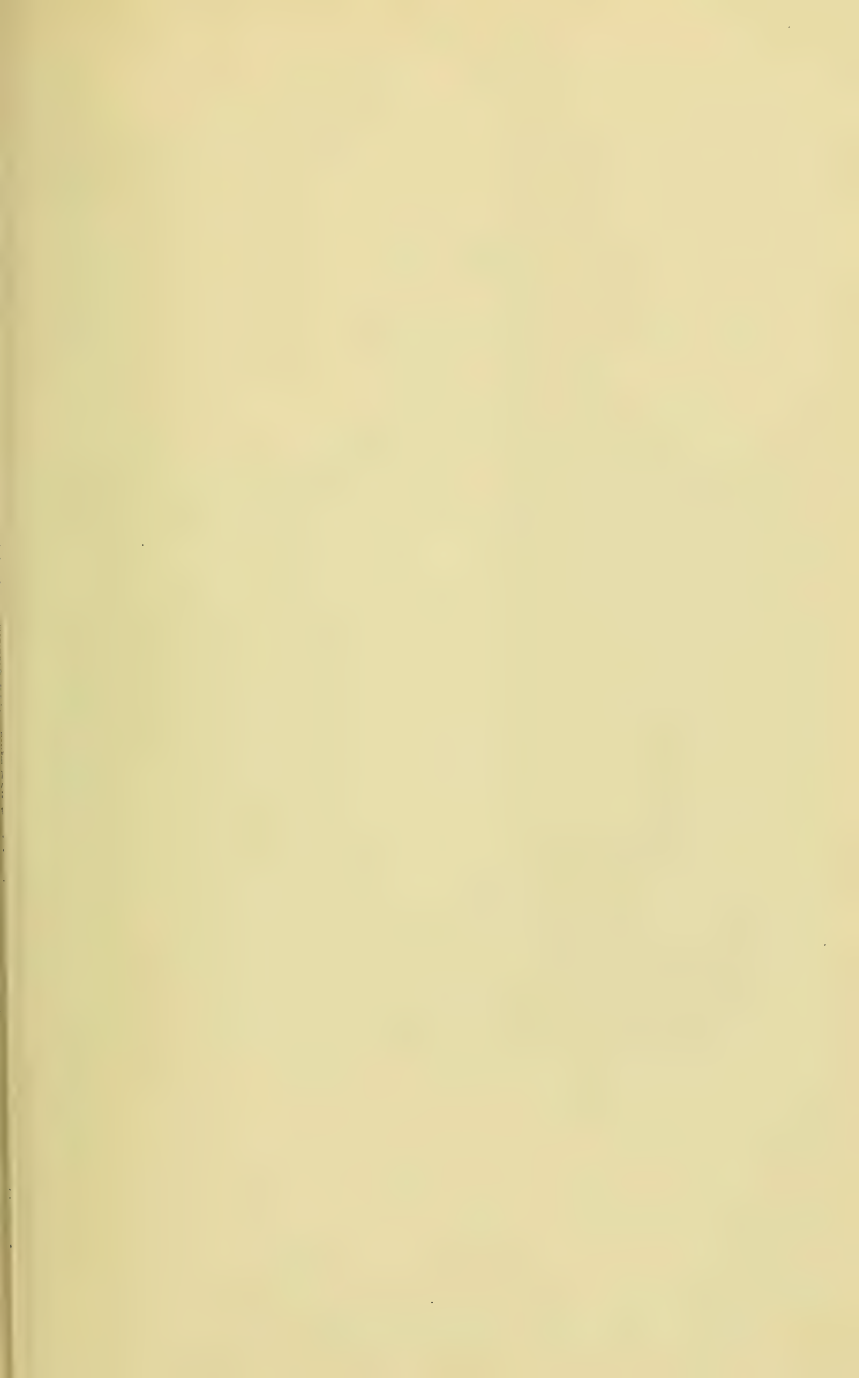
For Sale—A fine photographic car, well furnished. The only gallery in a good town of 2000. Cabinets, \$3.00 dozen. Splendid location for party with limited capital. Address M. D. Sloat, Oakdale, Cal.

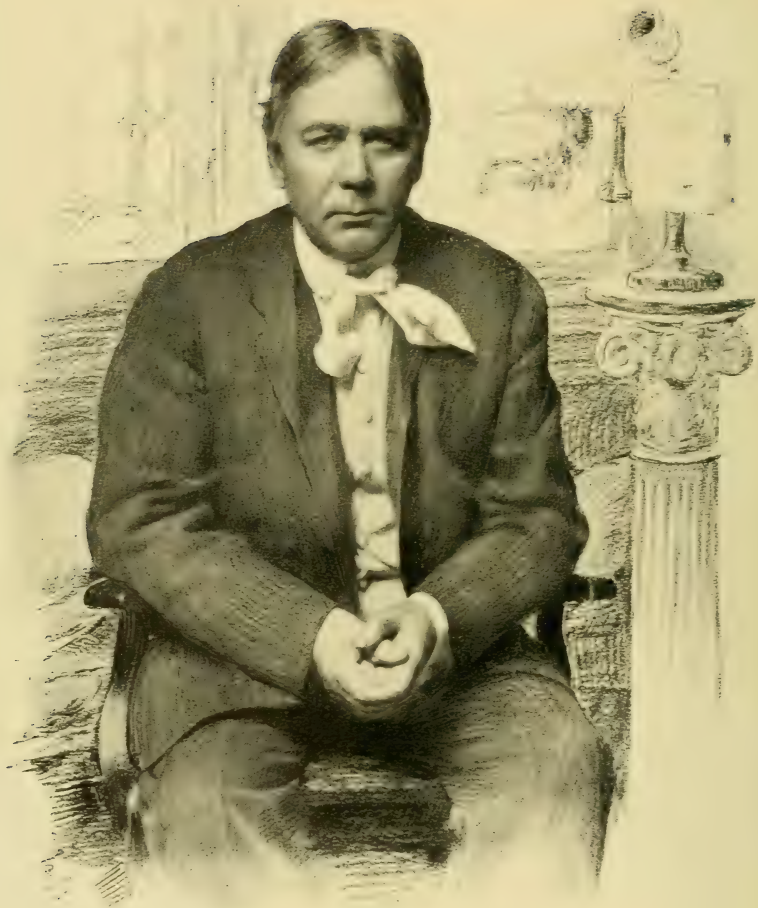
For Sale—Photograph gallery in good town, doing a good business. Cheap for cash. Only gallery in town. Good prices. Owner compelled to go East. Address Groves, Livermore, Cal.

A1—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

**A GOOD EXCHANGE MEDIUM
FOR AMATEURS**

PLEASE MENTION CAMERA CRAFT





COMMODORE STEFFINS OF CHICAGO
By J. C. STRAUS

CAMERA CRAFT

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LITTLE TALKS WITH FAMOUS PHOTOGRAPHERS

J. C. STRAUSS OF ST. LOUIS

BY CARL E. ACKERMAN



AFTER GAINSBOROUGH

LATE one summer afternoon, while in St. Louis, I decided to visit Julius Strauss in his studio. A ceaseless round of business calls in the morning had extended well into the day, and I felt the need of relaxation keenly. An almost interminable ride along dusty St. Louis streets brought me to the door of an unpretentious stone and brick structure, the distinguishing mark of which consisted of an embattled tower almost overlooking the street.

A well-groomed footman opened the door for me, and I passed into one of the famous photographic studios of the world with a feeling that I was destined to see and to learn strange things. Coming in from the strain of the garish summer sun, the impression of cathedral stillness made me

pause to consider my next step. The declining sun cast long and glowing shafts of multicolored light through the mullioned casements and stained-glass windows of a large room, furnished with almost Puritan simplicity.

At a desk lighted only by two upright incandescent bulbs, shaded with dark red silk, stood a tall, handsome fellow, intent upon interesting a trio of young women, dressed with all the charm of Southern summer maids—light, fluffy gowns that only Southern women know how to fashion. The group made a pretty picture, and, in spite of myself, I could not but note the difference between this treatment of possible patrons and that usually meted out by the average photographer. On the one side was modest elegance and quiet charm; on the other, commercialism and vulgar display.

After the young ladies took their departure I asked for Mr. Strauss.

"Busy," said the tall young man; "but he will be down in a moment. Make yourself comfortable."

And so I did. On every side were evidences of taste and refinement. The warm-tinted walls were in perfect harmony, and the absence of anything studied was a decided relief to nerves taxed with too frequent contact with



"This," continued the young man, "is what Mr. Strauss was doing before he began to make the lighter stuff."



"PAPA" CRAMER AND HIS WIFE

things commercial. In an alcove, extending from the desk at which the tall young man held sway, were a dozen unframed prints pinned to the wall. My curiosity finally became too strong, and with apparent carelessness I strolled over to the only evidence of photography in sight.

"Lytrit, some of Mr. Strauss' new work," said the young man.

And new they were, as you will see from the prints accompanying this little talk, for I afterward begged Mr. Strauss to let me reproduce some of them.

"This," continued the young man, "is what Mr. Strauss was doing before he began to make the lighter stuff."

He referred to several prints of a totally different nature, being somewhat after Rembrandt, but more fully lighted, and with an individuality all their own.

"They didn't take very well—'Too dark,' they said," added my informant.

At this juncture I became aware of a third person, and, turning, was introduced to Mr. Strauss.

The personality of the man dawned upon me at once. His piercing



A ROSE AMONG OTHERS
by J. C. STRAUSS



ON THE BOULEVARD
by J. C. STRAUSS

dark eyes and great height, the carelessly knotted tie, the cheerfulness of his welcome, made me see at once the man and the artist.

"Come up to my den," said he, leading the way up several flights of carpeted stairs to a small, circular room, which I instantly realized was in the tower I had remarked from the street. Long, narrow windows, permitted a free view of the street in both directions, while the panels above and between the windows were filled with paintings, evidently the work of many different hands.

Sinking on the cushioned seat that circled the cozy apartment, we began to talk, as men will when they first meet, of things that least concerned us. But accident favored me, and I mentioned the one subject upon which this taciturn man grew talkative. It was the fire that, but a few months before, had destroyed the studio and its accumulation of priceless treasures.

He told me of the many things he had gathered during his thirty-five years of work in St. Louis, of the care he had expended in perfecting every detail of the studio, and then, with dancing lights in his eyes, of the rude awakening, one freezing winter's night, the shout that his studio was on fire, the hurried dressing and still more hurried trip to the scene, only to find the fire fiend in full charge and greedily lapping the precious trappings and treasures of a lifetime. How, when a fireman, with swinging ax, was trying in vain to chop through the oaken door, he thrust him aside and unlocked the door, only to be driven back by a burst of flame and smoke.

He told me of the people who came to him in the light of his burning building and, with tears in their eyes, assured him of their sympathy. How, admitting no defeat, he hurried to the newspaper offices, just in time to insert advertisements informing his patrons that he would be open for business the next morning; the awakening of a photographer from profound slumber to dicker for the sale of his gallery; the conclusion of the sale and the scenes at the new gallery on the morning after the fire. All with a vividness and human interest that no one could resist.

Then, knowing that my interest was aroused, he showed me through his establishment—the establishment that had risen from the ashes of the old. I noted in the hallways and corridors hundreds of portraits, literally forming a frieze hundreds of feet in length and at least four feet high.

"Prominent citizens of St. Louis," said he, in response to my inquiring look.

As I glanced down upon the rows of pictures I began to realize the possibilities of this extraordinary frieze. No citizen of St. Louis could possibly pass this array of pictures without feeling that here, indeed, was a leader in his business. A series of oval pictures of young men in a small room, the walls of which were colored a bright red, attracted my attention.

"All bachelors," said Mr. Strauss, with a smile.

"A popular room with the ladies?" I asked.

Mr. Strauss smiled assent, and again I thought of the originality of the man and his methods.

But, to my mind, the most cheerful spot in the entire establishment was where it was to be least expected—the operating room. Here lay all the ingenuity of a mind given to artistic impulses and thoroughness of detail. An



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J. C. STRAUSS
ST. LOUIS
1901.

VIRGINIA CARVEL,
Character study of the heroine in "The Crisis"
Winston Churchill's latest novel
by J. C. STRAUSS



MR. STRAUSS AT WORK



THE GENTLEMAN FROM CALIFORNIA
by J. C. STRAUSS

immense fireplace in one end of the room lent an air of hospitality to the interior, which was strengthened in some degree by the warm tone of all its decorations. The high skylight was almost concealed with red curtains cleverly arranged, while the camera was the least conspicuous piece of furniture in the room. Welcome seemed to beam from every nook and corner, and the spotless appearance of every fixture seemed to impress itself on me.

In convenient places friezes and panels appeared on the walls, all the work of personal friends of the man who seemed to gather around him all of the artistic workers in the city.

He drew my especial attention to a statuette, the gift of some of the big photographers, "after the fire," the original tag of presentation still adorned the figure, which occupied one of the places of honor in the reception-room.

Then we came to the new pictures, and, without hesitation or doubt, I told him that he had succeeded in doing something often attempted but never achieved, the blending of the artist's pencil with the seeming unalterable process of photography, in such a manner as to preserve the truth of the photograph and yet give it the light, sketchy effect of an etching so charming to the eye.

"I have been working on these pictures all summer," said he, "and I think that they will attract attention. But there is no telling how the thing will go. Last winter I thought that I was doing the best work that I had ever done, but, somehow, the people said that it was too dark, and now I am going to make this light stuff. They want something new, and all that I can do is to give it to them."

Later, I watched him at work with his assistants, changing a line here or suggesting a shade there, seeming to have the confidence and respect of every worker, no matter how small a part he played in the work. In all of the workrooms there seemed to be an undercurrent of enthusiasm, a desire to please the master by doing everything well. A card tacked on the wall in one of the rooms bore this sage bit of wisdom: "At it all the time means success." Perhaps this was the keynote, but, whatever it was, success seemed in the atmosphere and work the presiding genius.

Seldom have I seen the balance so well maintained in one establishment. It seemed one big family, each member of which did his all for the common weal, the master mind in constant touch with his workers and striving for the happiness of all and the consciousness of work well done.

When we had passed through all of the rooms and had again reached the little chamber in the turret, I was surprised to see the lateness of the hour and began to make excuses for the seeming lack of courtesy on my part, but they were not accepted.

"You have asked no questions, you have listened patiently, and I want to talk to you about an idea I have," said the man who had known me scarcely an hour.

Then he began to unfold to me his plan of a separate building for photography at the Louisiana Purchase Exposition. The possibilities of such a move and what it meant to photography needed no explanation, but the details, rapidly sketched, showed the thought devoted to it, and I became instantly enthused.

As I write this the mail brings to me almost positive assurance that, for the first time in the history of expositions, photography will have a place in common with the other arts. And it is due to the untiring energy of Julius Strauss. The Photographers' Association of America has given the plan its support; has promised to meet in St. Louis in 1903; and when a new head is chosen for the national association, that head will, in all probability, be Julius Strauss.

**THE NEW PRESIDENT OF THE PHOTOGRAPHERS' ASSOCIATION
OF AMERICA**



GEORGE M. EDMONDSON OF CLEVELAND, OHIO

COMMITTEES NAMED, RULES FORMULATED AND ANNOUNCEMENTS ISSUED FOR THE SECOND SAN FRANCISCO PHOTOGRAPHIC SALON

NAMES OF THE COMMITTEE MEMBERS AND TEXT OF THE ANNOUNCEMENT

Salon work has started with a rush. Committees have been appointed and everyone is busy. The announcements are in the hands of the printer and will be mailed within a week. Interest workers the East and in foreign CAMERA CRAFT for September offered and the exhibition same plane as those in the suggestion as to accepting the foreign workers was Committee, and foreign exhibitors in their work may rest assured that the most careful attention will be paid in a suitable and satisfactory manner.



A. J. TREAT

The Committee on Selection has been appointed and is as follows:

ARCHIBALD J. TREAT, Artist and Photographer, Chairman.

L. P. LATIMER, Artist.

JOHN A. STANTON, Artist.

A. L. COOMBS, Photographer.

J. A. LANGSTROTH, Photographer.

The following announcement has been issued by the Executive Committee:

"The California Camera Club announces that, under joint management with the San Francisco Art Association, the Second San Francisco Photographic Salon will be held in the galleries of the Mark Hopkins Institute of Art, in the city of San Francisco, beginning January 9, 1902, and continuing two weeks.

"The object of the management of this salon is to exhibit that class of photographic work which shall best exemplify artistic feeling and execution, without regard to particular schools or fads; the pictures to be selected by a competent committee of artists and photographers appointed jointly by the San Francisco Art Association and the California Camera Club.

"Exhibitors of pictures which have been hung in other salons and exhibitions are specially invited to contribute."

The Executive Committee for 1902 is as follows:

W. B. WEBSTER, Chairman.

H. B. HOSMER.

W. E. PALMER.

E. G. EISEN.

W. J. STREET.

ROBERT H. FLETCHER, Curator Hopkins Institute.

But little change was made in the regulations governing the submission of pictures.

RULES AND REGULATIONS

All pictures must be either framed or matted under glass.

All transportation charges must be paid by the exhibitor, except in the case of foreign contributors, who may send their pictures unmounted if they so desire, the management undertaking to suitably mount those selected for exhibition and to return all pictures received from foreign exhibitors after the exhibition free of expense.

No prizes will be awarded and no charges will be made to exhibitors.

The title, the exhibitor's name and address, and, if for sale, the price, must be written on the label provided and attached to the back of each picture. Nothing shall appear on the front of the picture except its title and the maker's name.

Each picture submitted must be entirely the work of the exhibitor. Pictures will not be received bearing the names of firms or galleries.

All pictures submitted for exhibition must be addressed "San Francisco Photographic Salon, Mark Hopkins Institute of Art, San Francisco, California," and forwarded at owner's risk, charges prepaid, and delivered at the Institute not later than January 1st.

From the price of any pictures sold during the exhibition ten per cent will be deducted by the management.

No picture shall be removed from the gallery until after the close of the exhibition.

The management will not be responsible for any loss or damage that may occur; at the same time, all possible care will be taken to prevent such loss or injury.

To each contributor whose work has been accepted a catalogue will be mailed as a notification of such acceptance.

All communications must be addressed to the Executive Committee of the San Francisco Photographic Salon for 1902, 819 Market Street, San Francisco.

Arrangements have been made with Wells, Fargo & Co's Express, whereby shipments of pictures may be sent to the Mark Hopkins Institute of Art and a rebate of twenty per cent on the regular charges for packages of fifty pounds or over in weight will be made, the shipper to release the express company from liability.



BY J. F. PALMER, C. S. A. P.

AUTUMN LANDSCAPE

PRINTING AND MANIPULATION OF VELOX PAPER

BY EDWARD W. NEWCOMB
IN THREE PAPERS—FIRST PAPER.

In velox paper is embodied all the luxury of printing with none of the drawbacks. We do not have to wait for the sun, for we print either by day or by night with equal facility. We do not have to enter small darkrooms that are generally too hot or too cold and always ill-smelling, for we make our prints as we sit with the family in any room we please. We can produce more prints with velox in an hour or so than we could in many hours with printing-out paper, and the results, to say the least, are equally as good. We can obtain good velox prints from negatives that would yield but indifferent results by other processes, have our choice of several grades of surface, and a number of colors can be obtained in developing besides the beautiful black and white results generally produced, and the results are permanent beyond question. A beginner finds far less difficulty in comprehending the directions for use than in printing-out papers, and in spite of the fact that no image is seen until the paper reaches the developer, failures are few and far between. This is owing to the care taken in making the paper and to the fact that simplicity in working the paper was aimed for when it was put out some years ago.

I was shown completely over the works of the Nepera Company several years since, and as each step in manufacture was explained to me, from the making of the emulsion to the drying of the envelopes, boxes and circulars for the finished product, I saw why velox was so *certain*, so flawless and so even. When they weigh chemicals with scales that a grain of dust can readily disturb, when they distil water that is already as pure as any one could wish, when they filter all air that enters the factory, have every square inch of paper examined by young women in white gloves and adopt every manner of precaution to insure accuracy and evenness, as they do at Nepera Park, then there need be no wonder at the vast patronage the makers enjoy, not only in our own, but in foreign countries.

The mere making of good prints on velox needs but little explanation from me. Given a negative, a printing frame and some of the Nepera M. Q. developer, with some acid fixing salts, the beginner can make a good print from the negative out of his first dozen of paper by merely paying attention to the printed directions. I shall, in this article, endeavor to supplement the usual directions with a number of variations, some preliminaries and some suggestions as to manipulation, that have proved of value to me in practice.

Let us begin with the negative itself. What should its characteristics be? Should it be thin or dense or medium? If the making of good prints depended upon the negative being of *any* one particular degree of density it would not be worth our while to trouble ourselves with velox at all. I say, after a long experience with the paper, that if it be understood an excellent print can be made from any negative that will make a good print on other papers, and if one uses velox for all his work he will find that, as he understands the capability of it, he can make *better* prints on it than on all others, no matter what the quality of the negative may be. Only the other day I had a platinum out eight hours, and when I developed it I found I had it under-printed and useless. As I had to have a finished print the next morning, I resorted to velox, though the



"I'VE DE LUCKY NIGGER"
Copyrighted, 1900, by E. L. HOWE

negative was not by any means the kind we usually select as "just right" for that paper. In the weak daylight I gave an exposure of thirteen minutes, and one would certainly aver that the negative was made with special reference to use with no other paper. Later I printed a few dozen from thin negatives that were away under-developed and could not be made to yield decent prints on printing-out paper until intensified.

A negative of but medium density is best for the beginner, for then failure is hardly to be expected, but as soon as one has become aware of the real quality of velox the density of the negative is inconsequential. All one needs is practice in determining what exposure to give, and that can be cheaply had on small test slips an inch square. The negative I referred to has never yielded a carbon or platinum print as good as the thirteen-minute exposure velox. The beauty of velox is that it is slow and contrasty enough to secure every bit of detail from a thin negative without trouble, yet fast enough to search the good points out from the toughest kind of over-dense ones. The latitude is enormous, so the reader may take it for granted that velox is not one of those papers which the negative must be made "just so" for. You make the negative as best you can and then depend upon velox to bring out a print that shall be just as it should be.

If printing is done by daylight I should partially darken the room, as the paper, though not readily light-struck, is nevertheless far more sensitive than printing-out paper. I have used a black umbrella on the table to shade the paper from the light with perfect success, both by day and night. With the ordinary grade of velox this may only be a precautionary method, but with the



more rapid grade used for very dense negatives it is imperative that some shade be improvised.

But first, let us prepare our negatives carefully, so that the best possible results may be obtained. The first thing to do is to clean off the backs, and this I invariably do to both plates and films. A tuft of absorbent cotton is wet, and then squeezed nearly dry. If the negative has no emulsion or other sticky matter on its back, I just rub it a trifle with the wet cotton, dry with cloth and polish with tissue paper. If this is not sufficient a little sand soap, soda, rotten stone or chalk can be used. The backs will have to be polished clean ere we begin printing, as every streak on them would show on the print and do material damage to the effect we sought.

Having well cleaned the backs, our next duty is to inspect the negatives for pinholes, scratches or black specks. Laying each negative on a retouching frame (a printing frame with legs to hold it easel-like will do, if set on a white paper), we carefully spot out all the holes, being certain to accurately match the tint of the negative, else our efforts will only result in white spots on the print instead of black ones. India ink ground in gum or sugar water and colored a little with either red or blue, as may be required, will answer for this spotting, though the Ideal spotting medium, in two tints, is more efficacious. Use fine brushes for scratches and a pointed match stick to fill all round holes. This spotting of one's negatives is very pretty work, if not postponed until the very time for making prints. Taken as an evening's amusement, it is not an unpleasant way of filling in an hour or so of odd time. It really requires no great skill, but it does call for the exercise of patience if a negative is full of pinholes. The way to do it without hurrying is to cut a half-inch square in a piece of black paper, large enough to cover the negative, and lay the sheet down so that only that little square shows at a time. Then one does not see



TWO CONVENTION PICTURES



BY AUNE OF PORTLAND

all that has to be done, and time is taken in doing the little square properly.

After spotting always comes the improving. We may wish to touch a portion of the back to lighten up shadows, or add a touch of wash to the high-lights here and there to secure a better balance in the print. Velox is very susceptible to this sort of work, so we must be careful not to overdo it. Having thus prepared the negatives for printing, we are, perhaps, quite ready to desist until the next favorable opportunity. We accordingly replace our negatives in their manila cases, mark them as ready to print and reserve the pleasure of printing them for the next session. I have not spoken of the retouching of portrait negatives, as if that is to be done it had best be sent out; few amateurs essay such tedious work. Where only a moderate amount of pencil work is really required a drop of retouching solution is rubbed about on the negative until

tacky and nearly dry, when the surface will readily take the finely pointed hard lead. For solution, a dram of Venice turpentine in four of refined spirits of turpentine will answer. Never put off the little cleaning or spotting that is necessary on a lot of negatives till the actual time of printing; it is sure to result in a poor job.

Before printing we should take pains to understand the various effects to be had with the different grades of velox. There are a number of surfaces and two degrees of rapidity. The rough paper is, of course, used when detail is to be subordinate to effect while the smooth line, special portrait, affords a greater amount of detail. As for speed, the ordinary speed is the most contrasty and will afford good prints from very thin negatives indeed while the more rapid can be used on very chalky negatives with the result of softening down the contrasts amazingly. However, the subject will be taken up fully in the next paper.

NATURE IN MONOCHROME

BY FRANÇOIS VOITIER

Sitting in the park in the shade of a wide-spreading tree, enjoying the cool ocean breezes, I began to study nature, as I had hundreds of times before. As my eyes wandered over the beautiful panorama a feeling of disappointment took possession of me when I remembered that all this wealth of color, so harmoniously and delicately blended, is represented by the one word, monochrome, as far as the photographer is concerned. I recalled the experiments of MM. Niepce de St. Victor and E. Becquerel, of Paris, looking toward the solution of the problem of heliochromy, but realized that, although these gentlemen had done much in the direction indicated, the photographer is still unable to reproduce all this beauty of color except in monochrome.

Gradually my thoughts divided themselves into three distinct parts, and I will now present them to you in the order in which they occurred to me, in the hope that you will realize, if you have not already done so, the necessity of a better acquaintance with the material upon which you have to depend in the prosecution of the art of landscape photography—nature. The mental divisions of the subject, of which I have spoken, might be expressed something like this: That the really successful landscape photographer must be a student of nature, as, unless the different shades of color are appreciated in the objects themselves, it is impossible to correctly represent them in black and white; that a true love of nature and a real comprehension of her beauties will serve to create the desire to see her as faithfully reproduced in black and white as the art of photography, in its present advanced though still imperfect state, will permit; and that the variegated colors of the original scene, as seen by the eye, must not deceive the worker as to the appearance of the picture in monochrome, as seen by the lens.

In my opinion, the study of nature should be preliminary to the acquisition of knowledge of what might be styled the mechanical side of photography, and that thereafter the two branches should receive equal attention at all times. In short, to those who have decided to take up the art I would recommend that, before investing in the necessary outfit, they devote their spare time for a couple of weeks in studying the material which will form the subject of most of their subsequent pictures; and to those who possess a camera and its appurtenances, and have already tried their hands at landscape photography with varying degrees of success, I would suggest that they leave their cameras at home during a like period and pursue the same educational course. The word *study* in each of the above cases has been used advisedly, for of the thousands who walk in the parks, saunter through country lanes or wander over mountain and down dale, but a very small percentage really give such beautiful environments that consideration which would warrant them in assuming the appellation of student. They have eyes, but they see not; ears have they, but they hear not, neither do they understand.

Let us take a stroll together and see if I cannot demonstrate to you the fact that the objects upon which you may have gazed many times before possess beauties of which you have never dreamed. Look at the tree which stands almost in our pathway, as if inviting us to give it more than a

passing glance. Its foliage, you say, is green, but, if I may use the expression, there are greens and greens. Almost every shade of this color is represented in the leaves on a single bough, so exquisitely blended as to baffle the skill of the greatest painters to reproduce. A breath of wind imparts to them a gentle motion, kaleidoscopic in its effect, while a stronger gust forces them to show



BY E. M. BLAIN, C. S. A. P.

A BIT OF THE WOODLANDS

their silvery backs. Pluck a single leaf and examine it closely, and convince yourself that what, to the casual observer, is of one shade, is in reality composed of many. Note the different tints confined within the limits of the single leaf, as well as the tree as a whole. And the trunk, is it of one solid color? No; remark the indentations of varying depths; the rugged appearance here

and the comparatively smooth surface there; the knots, the bark, ranging in color from yellow to brown and gray. Then the grass—not a mass of green, but made up of different hues, darkened in places by the shadow cast by a structure or an overhanging tree. Turn your attention to the sky, and how many shades of blue are represented? The passing clouds seem to melt into each other, ever active in the formation of such fantastic shapes and figures as to delight and amaze the observer. And so we might dissect all the objects that strike the eye. Not a single one is made up of one tint, but of many. Now, we have been studying the trees and grass as they appear to us on close inspection. Distance serves to give the foliage a broader, more sketchy effect. 'Tis true that we are unable to distinguish the tints represented by each individual leaf and stem, but distance has not robbed the foliage of its beauty. It is presented to us, however, in the form of more or less heavy masses of variegated colors, but still possessing that exquisite range of tints which we observed in the single bough. The darker shades of green have assumed, in some places, a color almost bordering on black, while those portions on which the rays of the sun fall take on a golden hue.

And of what use is it to study nature as I have suggested, it may be asked. Just simply this. By having these details called to your attention you will naturally look for them yourself; and in finding them and appreciating them the desire will be created in you to represent them, as seen by the naked eye, in a corresponding range of tones on your negative reproduction; and in putting this desire into practice, your landscape photographs will be characterized with a tonality that was absent ere you had a better understanding of your subject.

Passing to my second thought. It is but natural that we should be exacting in the representation of a thing we love, especially when such representation is bereft of a feature which played so important a part in establishing that love. In fact, we would naturally exercise all our skill and ingenuity in reproducing it under its new and less perfect form in such a manner as to overcome, to the greatest possible degree, the defects of the process itself. Take, for example, the portrait of a parent, son, daughter, brother, sister or friend. Do we not feel dissatisfied—yes, hurt—if the photographer has not done justice to the one we love, or, in common parlance, if it does not look like him or her, as the case may be? Do we not expect to see in such a portrait some characteristic attitude or facial expression that imbues us with a feeling akin to that experienced in the actual presence of the loved one? Suppose, on the other hand, we take up a picture of someone whom we do not know and for whom we do not care; does the thought enter our mind as to whether it be a good resemblance or otherwise, whether it exhibits any of the characteristics of the original or not? No; we simply remark, maybe, as to the general personal appearance of the sitter or the finish of the photograph from the viewpoint of mechanical perfection, and there our interest ceases. And why? Because, inasmuch as the person it represents has no claim on our love or friendship, we are not concerned with the fact of its being a good likeness or a poor one. And so it is with nature. To know her is to love her, and to love her creates a desire in us to see her reproduced with the retention of as many as possible of those characteristics which have endeared her to us. I have always been opposed to the

use of the same word to express affection for human beings and liking for or interest in inanimate objects, but as the reader will, of course, translate the word *love* in its general acceptation as applied to the latter, I have employed it here.

As to my third thought. The tyro, although realizing that he cannot reproduce the landscape except in monochrome, oftentimes finds it difficult to disassociate in his mind the appearance of the view in its natural colors and in black and white on the negative. There is many a scene which, if it could be

photographed in color, would be worthy of reproduction, while the identical spot, if divorced from this feature, would make a flat and dull picture. Thus, you can see how imperative it is that, in the selection of your views, you should bear in mind their appearance in monochrome *only*, and not permit the colors to influence you in the slightest degree. This has proven so difficult, if not almost impossible, to many amateurs, particularly beginners, that mechanical devices have been suggested to aid in overcoming it. Among these, the better ones are probably a pair of smoked or blue spectacles or a small piece of smoked or blue glass, which will subdue the colors and enable the worker to see the view [somewhat as it will appear on the photographic dry plate. If, with the use of either of these, the amateur



BY EDWARD L. V. BOURKE

AS NIGHT COMES ON

still exposes plates on uninteresting and subjectless pieces of landscape, it is due to faulty composition and not to any deception through the presence of color.

In confirmation of my opinion as to the necessity of pursuing the course of study outlined, I would point out that a well-balanced negative is one that is composed of as many tones as the number of shades of color perceived by the eye in the original, these tones being repeated as often as their corresponding shade of color is represented in the natural object within the conception of the human vision. The worker should remember that the lens and shutter are merely mechanical devices for concentrating the light and regulating the amount that reaches the plate, respectively, and the reproduction of

a scene as seen by his eye is only possible by such adjustment of these pieces of mechanism as will bring the two visions into harmony. Nor should the fact be overlooked that the lens used must be adapted to the particular work in hand, one suitable for portraits being comparatively useless for landscapes. Your aim must be to reproduce nature as *you* see it, not as your neighbor or the lens see it, thus injecting a certain amount of individuality into your work. This article is, therefore, addressed particularly to two classes; first, those who let the lens do all, permitting it to transfer to the sensitive plate a mechanical impression of the landscape, which is oftentimes exaggerated and in direct opposition to the impression received by the eye; and, second, those who, if their conception of nature is reflected in their work, are either afflicted with defective eyesight or have not studied nature sufficiently well and long to really know what she looks like. The first division stands for a class who make no pretence of displaying individuality, and the second, those whose impressions are faulty from one cause or another, even allowing for any little eccentricities peculiar to the worker. Of course, it would be folly to criticize a person's individuality or lack of it; but when the impressions of an object claimed to represent one's idea of it go beyond the bounds of reason, deviating so greatly from the paths of an ordinary observer's vision, it ceases to be individuality and becomes eccentricity—the work of one who wilfully misconceives nature.

Did you ever notice how a child paints a picture with the little box of water colors that an indulgent parent or friend has purchased for its amusement? He puts on the colors according to his ideas of objects which he has seen—green for foliage, brown for tree trunks, red, yellow or blue for dresses, pink for faces, and so on—all in solid colors. When he grows older, he realizes that these objects represent more than one color or shade of color, and he proceeds to improve upon the work of his infancy accordingly. Arriving at a more mature age, his observation becomes keener, and he perceives a still greater range of tints in the things around him, and he continues to use his color box to yet better advantage, until at last, maybe, he develops into a painter, a student, a close observer of everything, and mentally observes all their beauties. And so it is with the landscape photographer. He transfers to the plate nature according to his conception of it, provided, of course, he pretends to do his work other than in a purely mechanical way. If such conception is merely a mass of black and white, deficient in tone gradations, it indicates limited observation, but the more he studies the objects around him, the more he sees in them, and the artistic value of his work is enhanced in the same ratio as his powers of observation increase. The whole question devolves into one of education, mental training.

Augment your personal happiness, and at the same time advance in the art of landscape photography, by loving, wooing and wedding yourself to nature ere the opportunity passes.

Not for today! O, thoughtless souls, give heed!

Think now ye sow—think now ye trim your flower;

There is a Spirit put in every deed,

That born in lightness, may become a power!

—By E. I. H.

THE SECOND CHICAGO PHOTOGRAPHIC SALON

BY LOUIS A. LAMB

With a contribution reaching almost eight per cent of the total prints submitted to the Chicago Jury of Selection, the Pacific Coast may well feel pride in her camera workers. More than sixty pictures came from San Francisco and Pacific Coast cities and a very creditable proportion of the number won the laurel of approval from one of the most critical artist juries ever called together to pass on a purely photographic exhibition. Whereas Mr. Maurer was almost, if not quite, the sole representative of California at the Salon of 1900, we have several this year, and their works have such a flavor of individuality that it is not without the pale of reasonable probability to venture a prediction that in no far distant time we shall have a distinctive school of "Coast Photography" rivaling, in many excellent qualities, the much-exploited "Eastern School." Chicago may fairly be said to have evolved distinction in the works of Dyer, Elizabeth Brownell, Bourke, Detlefsen, James and others. Philadelphia has expressed its individuality in the pictures of Troth, the former Miss Watson, Redfield, Stirling and others. New York has her Stieglitz, Eugene, Keiley and Mrs. Kasebier. And from the Pacific, represented by Maurer, Monteverde, D'Arcy Power and the rest of the salon contingent, there is ample promise of a rich future. It is quite in line with the observed order of things that from a fecund soil we should expect prolific art, marked



BY F. S. CROWELL, CHICAGO

YACHT CADILLAC

SECOND CHICAGO SALON

by creative power in extraordinary measure, pristine originality and great virility. As in the past the legend ran "*Lux ex Orient*," so in the future the watchword of photographic art may be "*Lux ex Occidente*," meaning the inspiration which springs from the skies, mountains, roses, citrus groves and that lovely infinity which stretches out from the Golden Gate.

Of the Chicago Salon of 1900 much good and evil has been said during the year just ended. Of the Salon of 1901 there seems to be only one opinion,

and that highly appreciative. Beyond all question, it is truly artistic. Not a picture on the walls of the Art Institute galleries will be found wanting though it be weighed in the finest balance of Art. To insure this result the jury was constituted with a majority of professional painters, men schooled in the atmosphere of the Louvre and of the Luxembourg. In judging the eight hundred odd pictures entered in the competition for the salon no work was accepted which could not first command the approval of the painters. Having passed that stage of the ordeal it came to trial on its photographic merits. In almost every case the artists were unfamiliar even with the names of the exhibitors, hence there was little danger of extraneous influences for or against any work.

"Palmar qui meruit" was the inexorable rule of the salon.

It is a pity that every one of the Coast exhibitors and all sincere amateurs may not view the great collection at the Art Institute. There is inspiration in it. Not a picture there but opens up vistas of new possibility. Every work has suggestions in composition, arrangement, handling of color and values and last, but not least, helpful hints as to the proper mounting and framing of photographic works. In speaking of this last matter a significant incident of the jury room should be brought to the attention of pictorial workers. It shows more clearly than anything else I can say how weighty a factor of salon success correct mounting is. One of the Pacific exhibits had the rare good fortune to suffer a trifling damage in



BY DR. F. DETLEFSEN

ZANDARA

SECOND CHICAGO SALON

transit. The picture—a symbolical figure piece—had been titled with a glaring gold panel but, in handling, the label was detached and the picture went to the jury minus this accessory, which, doubtless, the maker of the picture regarded as a highly essential part of the whole. The artists of the jury unhesitatingly accepted the print and the photographic minority concurred in the verdict. Just then somebody discovered the detached label and attached it in its intended position. But, alas, the bizarre gilding absolutely “killed” the scheme of tones and colors and turned a distinguished success into a mere commonplace. The jury, justly enough, voted that the picture should remain as it was judged, sans label, and it is really one of the striking successes of the salon.

The accidental breaking of glass in carriage contributed very considerably to the effectiveness of many pictures. To such an extent, indeed, that competent judges are inclined to question seriously whether any modern pictorial photograph should be glazed at all for gallery exhibition. Of the matte effects, such as gum-bichromates, this is doubtless true.

It would be a gratuitous piece of bad judgment to attempt to say which are the gold medal works of this salon. It is as impossible to do this as it would be to decide whether landscape or genre painting is better. In point of the qualities which go to make a great painter, Mr. F. Holland Day seems to excel. He shows admirable imaginative grasp of his motifs, as in his most pretentious work, "Beauty is Truth, Truth Beauty." His "Vas Lacrymarum," also, is of exceptional strength. It has the profoundly mystical quality that we find in the paintings of Elihu Vedder and among the pre-raphaelites. His "Menelik" is, beyond all debate, one of the technical triumphs of the salon and withal a strong characterization.

Miss Virginia Prall has taken possession of the field of religious motifs and has easily risen above the level of her precursor, Mrs. Kasebier, whose "Manger" held the place of honor in the Salon of 1900. Miss Prall shows several Madonna and Child pieces which, for composition and effects of light and shade as well as in point of imaginative beauty, are entitled to high artistic rank. Some of them have the quality of light which is familiar to those who know and who love Dagnan-Bouveret and his associates of the modern French school, and will be well known.

Mr. William B. Dyer unquestionably holds the world's premiership in the medium of bichromated gum. No works, either American or foreign—not



BY VIRGINIA M. PRALL.

CONSOLATION

SECOND CHICAGO SALON

even those of Robert Demachy — can approach the achievements of Mr. Dyer in this field. His portrait of Mr. Ralph Clarkson, the painter, is a *tour de force*. If it were in color and on a larger scale connoisseurs would call it a "Zorn portrait" and vote it at least "honorable mention." It has that subtle analysis of character, that virility of line and mass, that general assertion of power, that indescribable harmony which mark mastery in any art. The secret of it all, as far as there may be said to be any secret other than innate genius, is that Mr. Dyer is an indefatigable student of the best models of all schools of painting. He employs a minimum of the usual accessories of the studio, he has no cunningly devised lighting apparatus, his "kit" is of the simplest description — but he brings to his assistance an intimate knowledge of the best portraiture of ten centuries.

In the landscape class Mr. Henry Troth of Philadelphia easily leads the American school of pictorial photography. He knows the limitations of his instrument and heeds them rigorously. What cannot be done with lens and plate he does not attempt, but he compensates for these restrictions by a most intimate knowledge of nature's moods — and infinite patience. It is nothing for him to spend a day or two drawing an elaborate scenario of the picture he wants, and he has spent three days for the necessary conditions to prevail for the execution of his work with the camera. He is eminent for his knowledge of the fundamentals of landscape art, and his work deserves to be ranked among the classics of pictorial photography.

Chicago had but five representatives in the Salon of 1900. This year her contribution is much larger and some highly promising new men have appeared. Mr. E. L. Bourke, Dr. F. Detlefsen and one or two others show great promise and not a little admirable fulfilment. There is a very commendable quality about the landscape work of Mr. Bourke — extreme directness and sincerity of treatment, faultless choice of subject and high technical skill. Dr. Detlefsen, whose works have been reproduced recently in *CAMERA CRAFT*, has applied his thorough training in the chemical laboratory to the development of an original method of treating the platinotype, whereby he gains all the advantages of the glycerin process without any brush manipulation whatever. He has a happy faculty for figure work and will doubtless become an eminent exponent of that branch of the pictorial school which insists on purely photographic technique, without recourse to any of the methods of the Keiley cult.

There seems to be ample justification for the assertion that the Chicago Salon of 1901 has established a respectable ideal of practical camera endeavor toward which it will be worth the while of every earnest camera worker to strive with singleness of aim.

The following pictures were accepted from Western workers:

F. E. Monteverde, "The Fish Cleaner," "March." W. J. Street, "Passing of the Storm." Oscar Maurer, "A Foggy Day." George C. Meeker, "The Passing Shower." George M. Adams, Portrait of Miss Henschel. Walter A. Scott, "An Interesting Moment," "When Mercedes Joins the Sea," "Tangled Meshes." Arnold Genthe, "Study" (Head and Hand). Myra A. Wiggins, "The Babe." S. Knight White, "At the Wharf." H. D'Arcy Power, M. D., "Ursula," "A Philosopher." Laura Adams, "Reverie."

A PHOTOGRAPHIC ARMY TO IMPRESS SAN FRANCISCO ON A THOUSAND PLATES

HUNDREDS OF PHOTOGRAPHERS WILL JOIN IN THE
MOVEMENT TO PRESENT TO THE WORLD THE
SAN FRANCISCO OF TODAY

Here is a suggestion of interest to every Californian: President J. W. Erwin of the California Camera Club proposes to set a day and hour on which every available photographer in the California Club, the largest institution of its kind in the United States, will start to make pictures of San Francisco. Thus will the city's life, action and interest be portrayed in a single day; something that has never been done before—a plan that cannot fail to attract attention from all over the world. Mr. Erwin explains his plan in full herewith.

BY J. W. ERWIN

During a recent visit to Honolulu I met a resident of that city, who, as an amateur, has made some very clever things. I had the privilege of looking over a collection of his prints, and among them found a number of San Francisco views which were not only attractive from an artistic standpoint, but new to me. It is an old saying that one must go from home to get the news. In this case I found that I had to go from home to find some of the most attractive San Francisco photographs I had ever seen.

While en route home on the steamer I gave the matter considerable thought, and the conclusion reached was that we of San Francisco who are interested in photography were overlooking one of the best fields for photographic work to be found—our own city—and I decided to submit to the members of the California Camera Club a plan, the substance being that we devote a few hours, on some given day, to photographing San Francisco. The outings which are called from time to time have proven an interesting feature of the club work, and our collections of prints have been enriched thereby, but the more I consider the matter the more impressed am I that we have slighted our home city.

Strangers who visit San Francisco, especially if they have an eye for that which is interesting, novel and attractive from an artistic standpoint, have no difficulty in satisfying themselves and often secure and carry away with them photographic gems which surprise us when we happen to see them.

The California Camera Club has a membership of over four hundred. Suppose one hundred of these members would agree to devote a morning or afternoon, on a day to be agreed upon, to photographing the interesting features of San Francisco, not in a haphazard, go-as-you-please way, but systematically, following a plan to be carefully studied out. Let each one promise to expose not less than one dozen plates. The result would be upwards of twelve hundred subjects, and I venture to predict that the satisfaction derived from such an "outing" would be surprising.

Now, as to the plan. Let the club appoint a committee of arrangements to have full charge of the matter. This committee should send to each member a prospectus setting forth the plan in detail, and a blank agreement to be signed and returned to the committee. Let the agreement read something like this:

"I hereby agree to devote such time as may be necessary, on a day to be selected, to making photographs of scenes or studies in San Francisco, under the direction of the committee of arrangements appointed by the California Camera Club, and will endeavor to execute faithfully and to the best of my ability the work which may be assigned me. I further agree to make not less than twelve exposures, and to donate to the club an unmounted print from every good negative secured by me. That in the event of any of my pictures being chosen for the set of lantern slides illustrating the city of San Francisco I will either furnish a slide from each negative selected or place the negatives at the disposal of the lantern committee of the club to be used for this purpose. The pictures which I will make on this occasion will be — x —"

The committee should then district the city, having in view the artistic, novel and interesting features of each, and so defining them that there would be no doubt in the mind of a member as to what was expected of him. For instance, divide Golden Gate Park into four or five districts. Let one of them include the Chain of Lakes; another the Museum, the Aviary, and the Buffalo Paddock; a third the Children's Playground; a fourth the Conservatory, the flower beds and statuary in the vicinity, and a fifth Stow Lake and Strawberry Hill.

The water front would furnish work for three or four. The ferries and scenes on the bay as many more. Chinatown, say three; the Latin quarter an equal number. Scenes about the Lotta Fountain another. The old and historic buildings three or four. The City Hall two, securing both exterior and interior views of this interesting structure, with possibly a good photograph of Mayor Phelan at his desk. The Hall of Justice with its modern prison. The fountains and statues about the city. Local celebrities and local characters. Street scenes: Nob Hill, important manufacturing plants, the Fire Department, public buildings, the Presidio, Cliff House, Sutro Heights and Sutro Baths, the public squares, the hotels, Mission Dolores, the churches, the museums, the public libraries, all offer possibilities. In fact, there is practically no end to the opportunities of such an outing.

Let the prints secured be exhibited for a time on the club walls; and our next contribution to the American Lantern Slide Interchange should be a set of slides illustrating San Francisco as it is today, composed of one hundred and twenty-five of the best things secured. These slides could first be shown at one of our regular monthly exhibitions and then exhibited, through the Interchange, in every large city of the United States and many foreign cities.

THE PORTLAND CONVENTION

The Portland Convention, which convenes on the third of the month, will be attended by scores who neglected to do so last year. If the letters from the officers of the association count for anything the coming meeting will surprise those who attend by eclipsing in every way the conventions of the East.

SIMPLICITY OF OZOTYPE

BY H. D'ARCY POWER, M. D.

Until recently ozotype had only an academic interest for American photographers, inasmuch as the materials were not obtainable here. Now that one of the local firms has stocked ozotype supplies it becomes of practical importance. As a carbon and gum-bichromate worker, I have naturally been interested in this third pigment process, but I cannot say that I awaited its arrival with any great enthusiasm, for, thanks to the formidable account of the technique, its advantage, as compared with carbon, was not very apparent. Actual acquaintance with the working has dispelled the notion of the difficulty. Mr. Manly, the discoverer, devotes a book to the explanation of his process. Now, lest anyone be alarmed by this fact, let me describe, as shortly as possible, what is actually required. Before so doing, the reader must understand that ozotype is a pigment process allied to carbon, but differing from the latter in that the image is visible during printing and that this print is subsequently squeegeed into contact with a pigmented gelatine tissue. Otherwise, the technique of the two processes is identical.

Now for the *modus operandi*. A piece of paper is coated with the sensitizing solution by means of a brush or a tuft of absorbent cotton and dried in the dark. When dry it is printed under a negative until the details are visible in the high-lights, and then washed in cold water for fifteen minutes; dried, at least partly, and immersed, together with a piece of pigmented tissue, in the acetic acid bath warmed to eighty degrees Fahrenheit. The print and tissue are withdrawn in contact, as in single carbon transfer, squeegeed, and then, at any time after an hour, developed in warm water precisely as in the carbon process, passed through the alum bath, washed and dried. It will be seen by the carbon worker that there is little difference in so far as trouble is concerned. It is less troublesome than double transfer, and yet gives the image correctly placed and has the advantage, for those to whom it is such, in that the printing process can be watched.

Now, a few words as to the materials used. The sensitizing solution is a trade secret, but is known to consist of bichromate of sodium and manganese sulphate. The paper may be such as the worker likes, and will be one such as a carbon or bichromate worker would use. Unless of absorbent quality, sizing is unnecessary. I prefer Watman's hot-pressed, fine-surface paper. A paper is supplied by the Ozotype Company, but it is not a surface that I care for, though others may feel differently. The sensitizing of the paper should not be done in daylight, but gas or oil light is safe. While a special brush is recommended, I have found that a tuft of absorbent cotton is as good as anything. It is charged with the fluid and rapidly passed over the paper in parallel strokes, and the process repeated at right angles. It dries rapidly and is then about as sensitive as platinum paper. It is supposed to keep in this condition for two or three weeks, but my experience with paper more than three days old has not been satisfactory, and the beginner will do well to sensitize over night and print next day. After printing, ten to fifteen minutes washing is sufficient. It must not be too prolonged, otherwise the final result will be weak. The washed prints, when dried, may be kept between the leaves of a book for an indefinite period; nevertheless, I believe that the

more rapidly all the steps of the process are carried through the better is the result. The next step is to immerse the pigmented plaster in the acid bath until it softens, which takes from one to two minutes, then to place the print in the same bath, draw the two out together in such a way as to avoid the presence of air bubbles between them, squeegee into contact and set aside until it is convenient to develop them. Mr. Manly states that this may be done at any period after the following day. I have found that one hour is quite sufficient, and that the development proceeds most easily when the plasters have not had time to dry completely.

Now, a word on the subject of development. The plastered print is immersed in cold water for twenty minutes, and then removed to water that is just comfortably warm to the hand, about one hundred and ten degrees. When the pigment begins to ooze out at the edges the two paper surfaces are stripped apart under water and the print placed on any flat surface, a board, sheet of zinc or glass, and laved with the warm water until the image is clean and perfect; it is then transferred to a five-per-cent alum bath for five minutes, washed and dried. Personally, I prefer to fix the print with thumb tacks to a piece of board of corresponding size, and so float it, face downward, in the warm water. The pigment falls off by itself and the finest half-tones are better preserved; all labor is saved beyond the trouble of occasionally looking to see how the development goes on. This latter must not be neglected or the print may come out too light. The character of the print is largely dependent on the acid bath, and since the writing of his book Mr. Manly claims to have made some improvements therein. The following formula is now recommended as a standard:

Hydroquinone	20 to 25 grains
Glacial acetic acid	60 minims
Water	40 ounces

Now, supposing the perfect print to have been obtained, how does it compare with the results of the other processes? Against silver printing it has the advantage of permanency and a wide choice of tints; as against platinum, it has the lead in choice of tint and of paper. Compared with its two relatives, carbon and gum-bichromate, it is not so much a question of advantage as of difference. Compared with carbon, the ozotype print is softer and decidedly more amenable to local treatment; high-lights are easily strengthened with the brush, shadows may be lightened by a stream of water or the pulp of the finger under water, offending parts can even be entirely removed with a stiff brush and the surface made good with water color, without showing any trace of the operation. Carbon prints bear some resemblance to oil paintings; ozotype prints have more of the quality of water-color or wash drawings. Speaking of local reduction, *Photography* has recently drawn attention to the possibility of entirely removing parts of the image, of vignetting or otherwise reducing the picture by the application of a ten-per-cent solution of sodium sulphite to the print before it is placed in the acid bath. It has, therefore, greater latitude than carbon and yields an essentially different picture. In comparison with gum-bichromate, the advantage of ozotype lies in the facility of working.

CAMERA CRAFT

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VOL. III

SAN FRANCISCO, CALIFORNIA, OCTOBER, 1901

No. 6

The President is dead and we can but add a humble tribute to the thousands laid upon his bier, the bier of a man beloved of all and especially dear to the photographers, for whom he had ever the kindest of words and uniform courtesy.

Our suggestion, made last month, to the management of the Louisiana Purchase Exposition upon the advisability of admitting small cameras free to the exposition seems to have borne fruit. We have received scores of letters upon the subject all of which will be submitted to the exposition management. If any of our readers find the matter of sufficient interest to write to the exposition authorities or to us, rest assured that it will be productive of results. St. Louis is anxious to make her show better and grander than any preceding exposition and she will not let a subject of this character pass without consideration.

It is not too early now to prepare your prints for the Second San Francisco Salon. By delaying the matter your work may suffer and by turning it in early you will assist the salon committees in their labors. Do not delay but start at once.

In black-face type and some strange language the editor of *Photo-HAMLET*, Era has seen fit to comment harshly upon our inexperience shown EDITOR in a somewhat humorous effort to bring the selfsame editor and his contemporary of the *Photo-Miniature* to see the error of their ways. This action of our contemporary serves but to call to mind the boastings of Hamlet to Laertes at the grave of Ophelia:

Come show me what thou'lt do;
Woul't weep? Woul't fight? Woul't fast? Woul't tear thyself?
Woul't drink up Esil? Eat a crocodile?
I'll do't. Dost thou come here to whine?
To outface me with leaping in her grave?
Be buried quick with her, and so will I;
And if thou prate of mountains, let them throw
Millions of acres on us; till our ground
Singeing his pate against the burning zone
Make Ossa like a wart! Nay an' thou'lt mouth,
I'll rant as well as thou.

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK

CONDUCTED BY H. D'ARCY POWER, M. D.

HINTS ON CARBON PRINTING

The *British Journal of Photography* has a recent article by Mr. A. T. Newton on carbon printing which points out that the amateur worker is handicapped in using this process by the fact that the little details on which success depends are kept strictly to themselves by the professional printers and are not fully set forth in the books on the process. The article then proceeds to give some of the main points where the average worker goes wrong. First—Always see that the bichromate bath is slightly alkaline by means of litmus paper. If not, make it so by a few drops of liquid ammonia. This is a most important point, as the writer well knows from experience. Second—Take care that drying is complete in from five to six hours, and unless used at once keep the sensitized tissue in an air-tight case, preferably under pressure. Third—In developing prints lacking in contrast, do not forget that by the use of a sable pencil on the wet print, preferably under water, high-lights may be increased or put where they were not. To these hints let me add one that I always follow. Instead of washing up the image with water, pin the print on a piece of wood of the same size and let it float face downward in a pan of warm water. It will clear by itself and yield better half-tones.

ANILINE OZOTYPE

Nearly thirty years ago Mr. Willis described a process whereby positive prints could be made from positives by the action of aniline dyes on chromate image. Recently Herr Weingartner has devised a somewhat similar process whereby positive prints can be made from an ordinary negative, the lines of working being similar to those of ozotype. The following description from the English *Amateur Photographer* will enable the reader to experiment therewith:

Fine white writing-paper of a kind suitable for the gum-bichromate process is the basis, and sensitizing is performed as follows: A solution, consisting of sodium bichromate, 20 grammes; manganese sulphate, 20 grammes; and water, 100 grammes, is prepared; and when required for use, some of this solution is mixed with an equal quantity of gum-

mucilage, 40 per cent strength. This sensitizing preparation is brushed uniformly on the paper, and the sheets are dried in the dark. The exposure is under a negative, and should be judged by the visible image which is produced, rather than by the use of a photometer. Fixation or development, whichever the operation may be called, is conducted in cold or tepid water as in the ordinary gum-bichromate process. After this an image will remain which is compounded of gum together with manganese chromate. * * * The washing-out being complete, and the print being dry, it is pinned face upwards on a board, and the surface is brushed over with a slightly acidified solution of aniline hydrochlorate thickened with gum. The image soon becomes greenish, and finally deep green, but after the print has been washed and dried, the image is blue-black or violet-black, and it somewhat resembles a platinotype. If the coating of the original gum mixture is thick, and the exposure is short, a hard image deficient in half-tone will be obtained, but if the coating is thin, and the exposure is long, the result is a flat print with full details in the shadows. Several impressions may be made in succession on the same sheet. Instead of hydrochlorate of aniline, the corresponding salt of naphthylamine, phenylendiamine, or of paramidophenol may be used. The addition of a small quantity of a cupric salt to the sensitizing solution, or to the aniline solution, tends towards intensity of image. Herr Weingartner does not give any formula for the mucilaginous mixture of aniline hydrochlorate which is used in coloring the impression. For a first trial we would suggest the following: Crystals of aniline hydrochlorate, 10 grammes; mucilage of gum, 100 grammes; strong hydrochloric acid, .2 to 1 grammes. An undue excess of acid would be likely to cause a spreading of the color to the whites of the subject. It may be well to bear in mind that crystals of aniline hydrochlorate, as occurring in commerce, are sometimes contaminated with excess of aniline, and sometimes with acid, a state of things which may be somewhat embarrassing at first.

FRENCH CRITICISM

Whatever may be the opinion of a majority of the magazine writers on this side of the Atlantic as to the merits of the new American school, there is no denying the fact that they are creating a furore in Europe. English opinion was almost as sharply divided as American, but in France, so far as my reading goes, the verdict is entirely favorable.

THE PHOTO-MICROGRAPHER

CONDUCTED BY
THEODORE KITKA

PHOTO-MICROGRAPHY IN BOTANY

By CHARLES J. CHAMBERLAIN
UNIVERSITY OF CHICAGO

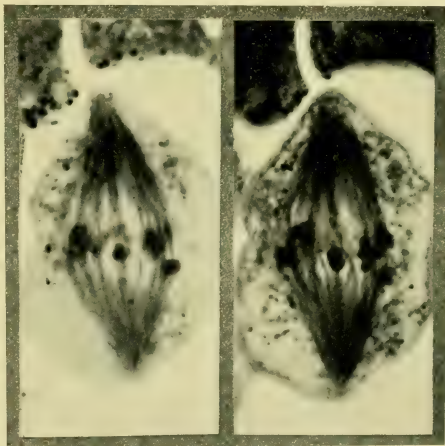
An examination of the leading German, French, English and American botanical journals shows that photography has long been used for illustrating scientific papers on this subject and that since really excellent half-tone reproductions have become available, the more expensive lithograph, made from tedious drawings, has almost disappeared in landscape reproductions, and is rapidly giving way in habit work, like figures of mushrooms, leaves and small plants or parts of plants which are to be represented in their natural size or, at least, not so reduced as when they appear as part of a landscape. Until the last decade, however, the photo-micrograph has been regarded by most botanists as merely an amusement for amateur enthusiasts who spend their time in photographing the markings on the valves of diatoms. It was no

doubt the successful reproduction of some of the diatom photo-micrographs which led botanists to try the camera upon other objects. It would be tedious to enumerate the photo-micrographs which have appeared in botanical journals and it might be difficult to tell just when the first one appeared. In July, 1892, a really good photo-micrograph of a section of wood was published in the "Annals of Botany," by Barber.

In "Flora" (vol. 78, 1894), Askenasy used photo micrographs to illustrate his article on "Australian Algae." In the same journal

(vol. 79, 1894) Belajeff used photo-micrographs to illustrate an article on "Karyokinesis in Plants," and in the following year (vol. 80, 1895), Farmer's paper on "Nuclear Division in Lily Anthers" was illustrated with photo-micrographs. In all four cases the photo-micrographs were reproduced by lithography. During this time an increasing proportion of photo-micrographs appeared in other journals and while there is much that is unsatisfactory, the superiority of such illustration, in certain lines of work, cannot be denied. It would be

almost impossible to duplicate with pen or pencil the illustrations that accompany Jeffrey's article on "The Morphology of the Central Cylinder in Angiosperms." (Transactions of Canadian Institute, vol. 6, 1900.) These are photo-micrographs of stems taken at a magnification of from fifteen to forty-five diameters, reproduced by the heliotype process. A late article by Livingston (*Botanical Gazette*, November, 1900) is illus-



Figures 4 and 5—Spore mother-cell of Royal Fern. Negatives by W. H. Knap. X 1420, one-sixteenth oil immersion, ocular, Bausch & Lomb apochromatic for photography; bellows extension, three feet; diaphragm, twelve millimeters; time, five minutes; plates, Cramer's isochromatic; Welsbach lamp. Figure 5 is from a much darker print.

trated by photo-micrographs of living algae. In this case, drawings would have been much less satisfactory.

In the same journal (August, 1900) photo-micrographs are used by Timberlake to illustrate an article on "The Cell Plate in Higher Plants." The magnifications range from 750 to 1500 diameters and the half-tone process is used in the reproduction.

The accompanying photo-micrographs suggest the possibilities of this branch of photography in practical botanical work. All of the sections are from material well fixed in

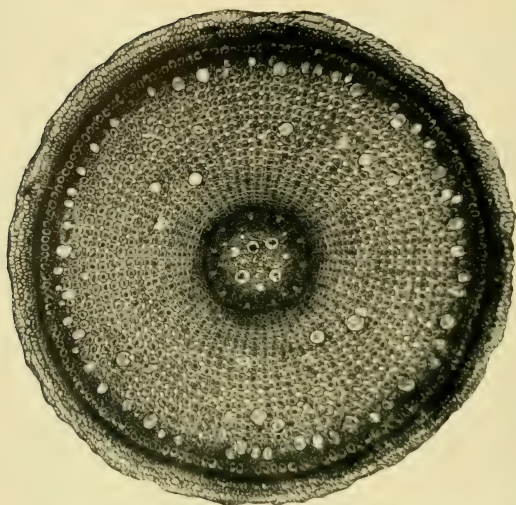


Figure 1.—Bur Reed (*Sparganium eurycarpum*). From a negative by W. J. G. Land. Transverse section of root, $\times 120$, objective, two-thirds of an inch, Bausch & Lomb, compensating ocular, 4 Zeiss; bellows extension, eighteen inches; diaphragm, three millimeters; time of exposure, five minutes; plate, Cramer's isochromatic, medium.

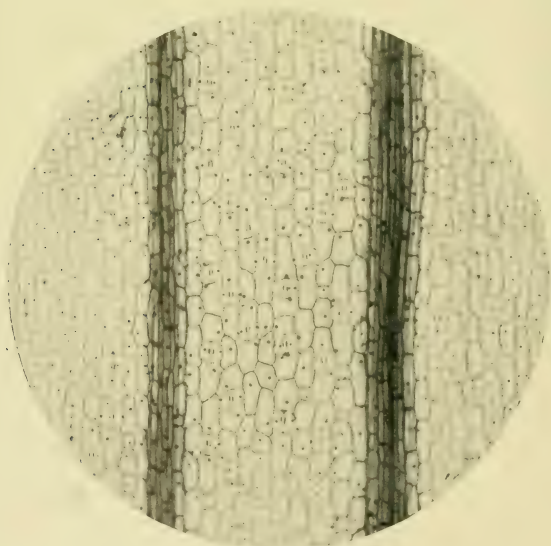


Figure 2.—Epidermis of Spider Lily. Negative by author. Magnified one hundred and twenty diameters. The same lens and exposure as in Figure 1.

chromo-acetic acid, gradually hardened in alcohols, cleared in xylol, imbedded in paraffin, cut with a microtome, stained and then mounted in balsam.

Figure 1 represents a transverse section of the root of the Bur Reed (*Sparganium eurycarpum*). The section is three microns (a micron is $\frac{1}{1000}$ of a millimeter—about $\frac{1}{25000}$ of an inch) in thickness and is stained in a dye which gives the cell walls a slight brownish color. For this, and also for figures 2 and 3, a Zeiss photo-micrographic outfit was used. The light was a Welsbach.

One hardly needs to be a botanist to recognize what a task it would be to make, with pen or pencil, an accurate representation of such a subject.

The second figure represents a small portion of epidermis from the under side of the leaf of the common Spider Lily (*Tradescantia Virginica*). It is not a section but simply a piece of the epidermis, stripped from the leaf, fixed in absolute alcohol and stained in Delafield's haematoxylin and erythrosin, a combination which gives a rich purple color to the cell walls and nuclei, and a faint, pink color to the chlorophyll bodies and starch grains.

To one unfamiliar with modern botanical micro-technique a pollen grain, barely visible to the naked eye, would seem too small to be cut into sections, but figure 3 represents one of the five sections into which the pollen grain was cut.

Probably the most difficult subjects yet attempted are the mitotic figures which are seen when plant-cells divide. To resolve the critical structures, such high powers are necessary that the depth of focus is so limited that it is impossible, with present methods, to bring out all the structures which are to be seen, even in a very thin section. Figures 4 and 5, showing the first division of the nucleus in a spore mother-cell of the Royal Fern (*Osmunda regalis*), illustrate this imperfection. The figures are from two negatives of the same object, the first focused for the lower end of the spindle and the second focused for the chromosomes. The features shown

by both could have been combined in one drawing. The negatives are from a section five microns thick, stained in safranin and gentian violet, a combination which stains the spindle violet and the chromosomes red.

When the prints being made today are compared with the objects, as seen with the microscope, it is found that the depth of focus is frequently greater in the print, so that it is necessary to change the fine adjustment in order to see with the microscope all that is shown in the print. The writer has frequently noticed this in photo-micrographs taken with very high powers. It is well known that astronomers secure photographs of stars which are invisible to the eye, even with the aid of the best telescopes. To those who are studying delicate cell structures this is an alluring suggestion and one which is, perhaps not altogether fanciful.

Many of the botanists are criticizing the photo-micrograph but it must be admitted that it has not had a fair trial. While the botanist may be able to focus for the desired structures, he rarely knows enough about exposures, illumination, diaphragms, developers—in fact, about photography—to get his copy ready for the publisher. Besides, he often works with makeshift apparatus which is not adequate for such work.

For low-power work, ten to fifty diameters, the photo-micrograph has come to stay; for medium powers, like figures 1 and 2, it certainly has decided advantages; for very high powers, like figures 4 and 5, it is useful, but its final value will be learned only when lenses of greater penetrating power have been made and the skill of the professional photographer has been brought to bear upon the preparation of negatives and prints.

THE MICROSCOPICAL SOCIETY

Active preparations are being made by the officers for an interesting series of lectures during the winter. More interest is being attracted to the meetings and new members are being added at every session. Dr. Gustav Eisen will soon give an interesting talk.



Figure 3.—Pollen grain of Lily (*Lilium Philadelphicum*). Negative by the author. X 600. Ten microns in thickness. Zeiss photographic outfit; objective, one-sixth of an inch, Bausch & Lomb; ocular 4 Zeiss; diaphragm, 3 millimeters; exposure, two minutes; plate, Cramer's isochromatic.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

SEPARATION OF THE LENSES IN STEREOGRAPHY Two or three of my correspondents have brought this matter up of late, and a little explanation may be of value. The theory that the distance of separation of the two lenses must equal that of the average human eyes is good as far as it goes, but as our photographic lenses do not possess the power of accommodation and axilar convergence that the human eye does, some provision should be made for altering the distance between the lenses employed in stereographic photography. Where near objects are being photographed, and even in portraiture, the ordinary amount of separation will often give an excessive or, rather, exaggerated relief. In the case of distant objects, four inches between centers would be none too much. Some of the best stereographs of clouds ever made were obtained by exposing the two halves as two separate plates, using two cameras, if I remember rightly, several hundred feet apart. From a separation of two and a half inches for portraiture and near objects up to one of four inches for views containing no near objects, the range should suffice for all ordinary purposes. Where small objects are photographed nearly full size, two inches would be better. It is easily seen that the right amount of separation is not a permanent quantity, but varies with the distance from the object in which it is desired to secure an appearance of relief in the finished stereograph. Any discussion of the subject is, therefore, futile, unless one intends to confine himself to subjects at a certain distance from the camera.

PHOTOGRAPHING NIGHT SCENES With one exception, all the night views that I have seen published were taken at close range. This I think is all wrong. Did you ever stand on an elevation and view the quiet charm of a town or village as it lay at your feet on a starlight night? The rows of street lamps fade away in the distance. In one place a row of well-lit store fronts show up plainly; in another, the dark green of a park or private grounds make a dark mass that assists in

emphasizing the better-lighted portions. Here the river or bay shore forms a curve that helps the composition, while there a church spire rises and cuts the sky line, breaking the monotony at just the right point. Spend an evening looking for the most advantageous point of view, and then take your camera there another night and make a couple of exposures. Use a backed plate or one of the double-coated variety, a rather large stop, and give about a three-minute exposure. Forty-five minutes with F. 11. 3 has given me a good negative on a slightly cloudy evening. You may wish more or less detail than I secured. Judgment used in printing and mounting will count for a great deal. Spottiness should be avoided as much as possible in selecting the view, and the sky line and foreground are best broken up slightly. The lights, being more at a distance, are better rendered, and, altogether, I think these distant views will appeal more forcibly as night scenes than those taken at closer range. To me they suggest scenes as I have stopped to admire them, while the other kind seem to owe their charm more to their striking effect than to a rendition of a naturally pleasing view.

A correspondent inquires "DOUBLES" if he can make the so- AND "GHOSTS" called "doubles" and "ghosts" with his hand camera. Doubles are photographs in which one person is seen in two positions, as, for instance, a man playing cards with himself. Ghosts are simply undertimed images of a white-draped model through which the furniture, walls and the like may be more or less distinctly seen. The best way to go about the matter in order to produce doubles is to make a box with two folding or sliding doors at one end, and just large enough to snugly fit the camera front at the other. The exact distance at which these doors should be placed in front of the camera depends on the focus of the lens. It should be such that the image of one door, when the other is opened, comes exactly in the center of the plate. A few trials will determine the correct distance. One has then but to pose the subject at one

side of a table, open the door on that side and make an exposure. Ask the subject to change to the other side of the table, close the first door, open the other and expose again. A model with rather pronounced features must be chosen if success is desired. There should be no doubt as to the two persons shown in the picture being one and the same.

Ghosts are most easily simulated under conditions demanding a fairly long exposure. A small stop and an interior are generally employed. The person taking the part of the ghost remains in one position for a few seconds during the exposure, which lasts much longer. If several ghosts are desired the same model moves quickly from point to point, remaining stationary at each one long enough to faintly impress the plate.

From letters I am constantly receiving I am led to believe that there are a few who read this department regularly and occasionally find it instructive. Such odds and ends as are run together from month to month are just such bits of experience or lessons learned as even the most veritable tyro among my readers are encountering from time to time. Will you kindly jot down these lessons learned or experiences met with and send them to me, that others may profit as well? I think my correspondents will bear me out when I say that all letters are given attention, and there is little fear of my getting too many, either those containing information or a request for it. Make it a personal matter. Do not be modest. You are not telling me, but some beginner, how to do something, and you will be helping me to help him; and perhaps some one may send in some hint that will help you.

This is a question that I have tried to answer several times in the last month. One might just as well try to answer the question, How long will coal burn? It all depends on the kind and conditions. A two-solution developer will keep much better than one in which the developing agent and the alkali are mixed in one solution. Protected from the air, a two-solution developer will keep almost indefinitely. A one-solution developer, if distilled water be used, will keep in a well-stoppered bottle for a year or more. Boiling the water

drives off a great amount of air and renders it more desirable for compounding developers, while keeping the solution in several small bottles filled to the cork, instead of one large one that is constantly being used from, is another precaution that prevents the action of air. The addition of a few grains of citric acid to the solution containing the developing agent and the sulphite of soda will, by neutralizing the alkali always present in the sulphite, increase the keeping quality of the solution. The alkali solution, if kept separate, will keep indefinitely. By using water that has been boiled, a little citric acid and a two-solution developer, I find that my pyro developer keeps for several months. Some put away in small bottles, well corked and laid on their sides, has been kept for sixteen months and found as good as a freshly prepared developer. Metol and hydroquinone as one-solution developers have retained all their strength, under the same favorable conditions, for even longer periods.

Another correspondent, who says he has difficulty in obtaining clear high - lights, wishes to know what developer is employed by the professional slide-makers of England, whose brilliant slides he seems to admire. The professional slide-makers referred to almost invariably use wet collodion plates, but I have seen slides made on gelatine plates and developed with ferrous-oxalate that left nothing to be desired in the way of brilliancy. Here is a formula highly recommended by a well-known English worker:

A.	
Oxalate of potassium.....	1 ounce
Chloride of ammonium.....	20 grains
Water.....	16 ounces
B.	
Sulphate of iron (crystals).....	2 drams
Citric acid.....	1 dram
Water.....	16 ounces
C.	
Bromide of potassium.....	2 ounces
Sugar.....	2 drams
Water.....	6 ounces
(Dissolve the sugar last.)	

Use equal parts of A and B, and add four or five drops of C to each ounce of the developer. Do not alter the developer, but expose to suit it. It is only in this way that brilliant results may be obtained. The iron solution should always be added to the oxalate. If the opposite course is followed muddiness will result and the developer be spoiled.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

KODAK DEVELOPING IN THREE SOLUTIONS

There is a great deal of complaint among those amateurs who have their developing done by professional photographers. Of course, I know that the ruinously low prices they get for this sort of work makes it impossible to spend much time over a roll of film. Yet I think much better results can be obtained without using any more time, if the three-solution developing plan is used. Although I do not make a practice of developing films, excepting my own, and occasionally those of friends, I know it takes no longer, and in some cases not so long, if the following plan is adopted:

Start the development of all films in a normal solution, a weak hydroquinone with a trace of metol. This solution will bring up the image so that the under-exposure or over-exposure will not be damaged. After the images appear on the film so that the partition lines show, it should be run through clear water. This stops the development partly and allows plenty of time for the films to be cut. The over-exposure can then be placed in a cool solution of hydrochinon restrained with bromide. The under-exposures, as they are cut, can be immersed in a metol solution, with a little hydroquinone and about seventy degrees in temperature. The normal exposures may be retained in the first normal solution, where they will develop to their proper strength inside of five minutes.

A roll of twelve impressions can thus be developed to the best possible advantage with the least waste of time.

Of course, each tray containing the different developers must be watched very closely. As the development of each negative is finished it should be placed in clear water, with two or three changes, and then placed in the hypo bath, film side down, and moved about occasionally, so even fixing may be assured.

After the films are taken out of the fixing solution they are washed for a couple of hours, then looked over to see if any need strengthening or reducing, because the average amateur films are very much of an

unknown quantity, and after-reduction or strengthening must be resorted to in many cases. Those to be strengthened can be immersed in a ten-per-cent solution of bichloride of mercury until bleached, then in a weak solution of liquid ammonia and water. This will, in many cases, save the negative that would otherwise be useless, by giving it the proper printing qualities. The reduction of a film can be done with a weak solution of red prussiate of potash and hypo, a quarter of an ounce of each in four ounces of water. The film is immersed in this solution for a few moments, then washed and inspected. If not reduced enough, it should be replaced in the reducing solution for a short time, then washed and inspected a second time. For local reduction a camel's hair brush should be dipped into the solution, the film held at an angle, so that the chemicals do not run over and spoil it. Thus, local reduction can be very advantageously applied to the sky and other portions that are very dense, transforming a very poor negative into an even printing one that will give a good, harmonious picture.

ACCIDENTS IN THE USE OF AMMONIUM PERSULPHATE

Those who frequently use the above reducer know that, good as it is, it occasionally goes wrong. Dr. Hauberrisser in the *Atelier des Photographes* states that stains arise from two causes, viz., insufficient primary fixation, or incomplete elimination of the hypo. It has been frequently stated that traces of hypo were of no consequence as they were destroyed by the persulphate, but this is not the opinion of this writer, who says that if hypo does remain, it ought to be eliminated by immersing the plate in a four-per-cent solution of the persulphate rendered alkaline by a few drops of ammonia. After a period of not less than five minutes the bath is made acid by the drop-by-drop addition of weak sulphuric acid and the reduction proceeded with. If, on the other hand, the fixation has been imperfectly performed and the image consist in part of silver sulphide then no after treatment will save it. Therefore take care to fix in sufficiently strong hypo.

Speaking of persulphate reminds me of a note in the *Photographische Rundschau*, which I herewith translate: "A New Reducer.—A weak (pale yellow) solution of ammonium bichromate, to which a few drops of sulphuric acid have been added, acts as a good reducer for negative plates. Strongly fogged plates are cleared in a few seconds. If the bath works too strongly it is only needful to add one to three drops of the acid or a little more of the bichromate. My experiments did not always give the same results. Sometimes the plates became more contrasty; sometimes thinner. The quicker the solution works the better the result.—L. Schlemmer, Strassburg." To which the editor of the *Rundschau* adds the following note: "Hitherto it was only known that a mixture of ammonium bichromate and hypo formed a good reducer for paper prints. The above mentioned reducing action doubtless depends on the existence of traces of salt (Na. Cl.) in the water used, whereby a portion of the metallic silver was converted into the chloride. Hydrochloric acid ought to be better adapted for

acidifying than sulphuric acid and in any case the refixing of the negative is to be recommended."

FACING MOUNTS WITH THIN PAPER

A correspondent in St. Louis has a stock of the once popular white mounts which he is desirous of facing with some dark-tinted paper. Several hundred of the mounts, which are of a fine quality and large size, make it desirable that they be utilized. His attempts have only resulted in badly curled mounts. Let him try the following plan: Dampen the surface of the card with a wet sponge and lay it aside to expand. Then dampen the tinted paper as evenly and lightly as possible. Returning to the card, which will be found curled more or less, dampen it again with the sponge. Now give the paper a thin coat of paste; place on the mount and let both dry together, and become flat in so doing. The whole secret lies in getting the card thoroughly expanded before applying the paper surface. Unless this is done, the mount will become curled on drying.

BUSINESS NOTES

During the past several years the public interest in the State flower has been largely on the increase. Its adaptability to a variety of artistic purposes and poetic ideals has caused the artist, photographer and poet to vie with each other in portraying its beauties and singing its praises.

A beautiful illustrated work, "The Golden Poppy," is soon to be issued, embodying the history, art and poetry of our floral favorite. As the book is designed to include the very best that has been written in regard to the poppy, it should also include the very best photographic portrayals of its beauties. The author, Professor Emory E. Smith of Palo Alto, Cal., would be glad to receive prints, from any of the CAMERA CRAFT readers, of their best poppy negatives. Full credit will be given for all that can be used. The book is to be dedicated to the California State Floral Society.

It is pleasing to know that our brilliant State flower is to be thus dignified, and that the souvenir will soon be available to the nature-loving public.

To the frequent requests from readers who are interested in making their own trays, we wish to say that the Mogul paint recently

referred to by Mr. Clute for use in coating home-made trays, is for sale by Messrs. Kirk, Geary & Co., 220 Sutter Street, San Francisco.

Messrs. Taprell, Loomis & Co. sent us recently a specimen of their new Princeton ovals. This new card is one of the neatest things of the year, and a specimen will be gladly furnished by the firm for closer inspection.

Messrs. Burke & James of Chicago have recently published a catalogue full of interest to every amateur. A copy will be sent free of charge to all those who wish it.

The Boflay Camera and Chemical Company, Newark, N. J., have placed on the market a combined automatic developing and fixing solution, and are advertising it extensively. Their advertisement will be found in this issue, and will prove of interest to all amateurs.

The Chelsea Manufacturing Company, which makes one of the best flashlight pistols on the market, have a new gun that is very attractive. They also print a free booklet that is very interesting.

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NOVEMBER

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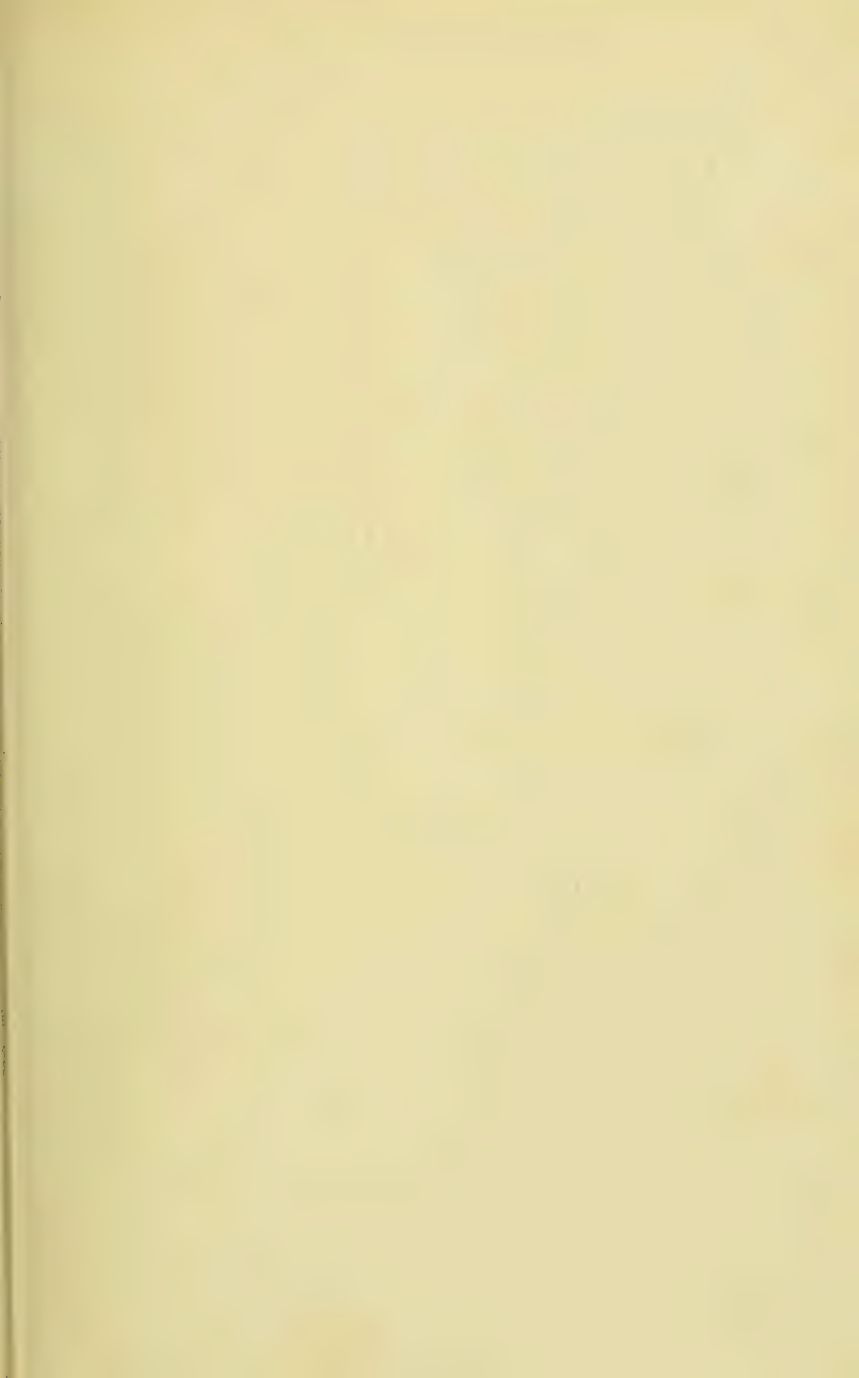
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ANCHORED
by H. C. PONTING

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IV.

SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1901

NO. 1

A VISIT TO THE HOME OF THE HAVASUPAIS

BY GEORGE WHARTON JAMES

ILLUSTRATED FROM COPYRIGHTED PHOTOGRAPHS BY THE WRITER

Nonsense galore has been written about most of the Indian peoples of the United States, but of none more so than of the Havasupai Indians of Northern Arizona. Until recently nobody really knew anything about them, and that want of knowledge left room for the freest play of the imagination. Hence, every time they were mentioned each writer drew upon his own vivid and active brain for his facts, and the result has been a great conglomeration of interesting but inaccurate statements. It was known, however, that they lived deep down in the secret recesses of a canyon, the trails into which few white men knew, and those who did know, or professed to know, told such awful stories of dangerous precipices, along the face of which mere scratches were made, and that these were the so-called trails, that only the most venturesome dared brave the attempt to reach these "Supais," as the pioneers termed them.

Students of governmental literature were familiar with the attempt of a doctor of Lieutenant Ives' exploring party to reach the village, and how he broke a crazy ladder in his descent and was pulled out with the greatest



COVERING THE WATER BOTTLE

difficulty. That was in 1858. Older delvers in the records of the Spanish pioneers knew that in 1776 Padre Garces visited these people in their canyon home, and was so plainly shown that he was welcome that he was forced to remain with them for five days.

In my book on the Grand Canyon* I have written of the adventures of Mr. W. W. Bass, when, nearly twenty years ago, he tried to reach the Havasupais. He it was who, several years later, piloted me down one of the almost unknown trails to see this hidden people in their own habitat. Every year since then I have visited them one or more times, and I have never ceased to feel the keenest of interest both in the journey and in the Indians themselves; and when to these factors of interest is added the charm of the waterfalls that give the common name, Cataract Canyon, to the home of the Havasupais, one may the better understand the continual attractiveness the place holds for me.

I do not know so picturesque a home for a people elsewhere in the world. I yield to no man in my admiration for Gibraltar, Genoa, Pasadena and the much-bepraised cliff cities of Acoma and the Hopi. But, let my readers imagine, if they can, a home deep down between the walls of a canyon, so narrow that the sun shines for but a few hours in the day, and where, if one chooses to move back and forth, he can be in the shade every hour of the twenty-four. Picture these walls, one to two thousand feet high, of a rich red color, and then stand so that you can see above their tops. You then find, to your amazement, that they are but the first steps of a series of walls that slope back and then ascend abruptly until they reach a maximum height of five thousand or six thousand feet, presenting a variety of colors and tints varying from the richest reds to the softest grays. Now look down upon the space between the lower walls. It is one mass of verdant, luxuriant foliage. Through the whole garden spot runs a beautiful stream of clear, blue water, from which the Indians and their canyon obtain their proper names—Haha, water; vasu, blue; pai, people—the Havasupai, or people of the blue water. A poetic name for a poetic spot and a poetic people. From the picture opposite, a crude idea may be had of what I have so rudely attempted to describe. Cornfields, and patches where beans, melons, squash, chili and other vegetables grow abundantly, orchards where peaches and figs ripen in the warm sun and give delicious food to the desert-worn traveler who finally reaches this desirable haven, and, clearly telling of the winding course of the Havasu, the millions of willows that line its banks, these make up the restful beauty of the scene.

Only two hundred in number, one may soon become acquainted with every man, woman and child of the tribe. They are typical Indians, some good, some fair, and some far from fair. In stature they are of medium height, muscular and strong, but neither as athletic nor robust as their near neighbors and friends, the Hopi and the Navajo.

The homes, or "hawas," are generally built of cottonwood poles and willows, open in summer and covered with dirt in winter. In all my visits to them I generally accept the hospitality of one or other of my friends, establishing my camp close to a "hawa," where, when I go out on diverse excursions, I may leave my provisions and photographic materials in safety. The soil is all sand, washed down and lodged here in the course of the centuries; and by means of

* "In and Around the Grand Canyon," published by Little, Brown & Co., Boston, Mass.



—a home deep down between the walls of a canyon, so narrow
that the sun shines for but a few hours in the day—

irrigation, at which the Havasupais are adepts, they make their fields green and productive. Hospitable to a fault, the household is ready to make the friendly visitor comfortable. A call for "haha"—water—brings the youngest girl, and, with the basket bottle suspended from her forehead by a strap, she gaily trips



MAKING A KU-U

to the Havasu, dips in her "esuwa," and returns with a shy smile to your side.

The Havasupais are expert basket-weavers. In one of the illustrations Yunosi is engaged in making a *ku-u*, or saucer-shaped basket. The colors are white and black, the former being the peeled willows and the latter the pod of the martynia or cat's claw. These *ku-us*, from time immemorial, have been used as dishes, saucers, cooking utensils, and, lined with clay, for parching corn. This is an interesting operation to watch. Lining her basket with clay, in which a certain amount of sand is mixed to prevent cracking, the woman takes it, when the clay is dry, and places therein the corn she wishes to parch. To this she adds a handful of live coals. Then, tossing the contents of the basket up and down with a spiral motion, she blows upon the coals, watching her corn the while until it is sufficiently parched.

Yunosi, the basket-weaver, gained her name in a rather singular manner. Her first husband, Hotouta, or "One-eyed Tom," as he was known to the whites, died in a most pathetic and tragic manner. With an Indian woman's devotion she loved her dusky lord, and deeply and sincerely grieved his loss. During the nights of her early widowhood she would dream of the sufferings of her dying husband, and, in a kind of dream frenzy, would rise from her

blankets and call upon others to look at him. As her friends gathered around her and asked her what she saw, she would exclaim, in broken English:

"I see Tom, my husband. You no see? You no see?"

And the fact that they were unable to see him seemed to drive her to desperation and frenzy that was pathetic in the extreme. From the fact that this transpired a number of times she lost her former name, and to this day is known as "Yunosi," in memory of the frantic question of her dreams.

In another illustration a young Havasupai woman is covering with pinon gum the basket-woven esuwa, or water bottle. This is woven of wickers, with a kind of double-twined stitch, and, after being "primed" with red ochre, is covered with the heated gum of the pinon tree and thus made waterproof. No white man's canteen ever made equals this rude Indian's water bottle for reliability and durability. I have seen one kicked about by wild horses only to be picked up unhurt, when an ordinary zinc canteen would have been battered out of all shape and usefulness.

I might write a very interesting chapter on the food of the Havasupais. In the early days wild grass seeds, mescal, made from the fibers of a certain kind of yucca, the fruit of the prickly pear and the yucca baccata or "hosh-kou" of the Navajoes, together with their native corn, formed the chief part of



MAKING MEALA

their diet, in addition to the flesh of the deer, antelope, squirrel, rabbit and other small game and vermin.

They have a number of ways of "fixing" corn, their bread, or "meala," being quite palatable. The wife of Chick-a-pan-i-gi, at whose "hawa" I made my last camp in September, 1901, is busy making meala in one of the pictures. After grinding the corn on a rude block of stone or metate, she mixes it with water and whatever coloring or flavoring matter she desires. Then, taking a





A QUIET SMOKE

corn husk, she wraps in it a small handful of the mixture, neatly folding it up so that the contents are well protected. As soon as all her mixture is thus wrapped up she makes a bed of coals, places her wrapped corn in a pile upon it and covers the whole with a tin dishpan. Over this she spreads a layer of coals, which she fans into life until she deems her meal properly cooked. Then the cover is removed and the family groups itself around the renewed fire, speedily to demolish the pile.

But it is not the family only who are welcome. I have been astonished and rebuked again and again at the open-handed and lavish hospitality these poor, "brutal savages" show one to another. No matter who comes, he or she sits down as if expected. The bread, stew, beans, melons or what not are either handed out or more generally "reached for," as if every person present had a proprietary right. There is no reserve, no holding back, no mock modesty. The idea of not being welcome never seems to enter into the calculation of the visitors, and certainly could never be inferred from the conduct of the hosts or hostesses. What a comment on our high civilization! The stranger within our gates, unless he is known to us, comes well recommended or may be useful to us, might look for a long time, even hungrily and longingly, at our table before we would invite him to "sit up and help himself," but among these "rude, brutal savages" hospitality is a primitive virtue which not one of them could afford to neglect.

The preceding illustration shows an old man, almost blind, who came to my camp and was thus hospitably entertained. After he had eaten to repletion, I could not resist the impulse to add to his pleasure by giving him a little tobacco, and then, as he enjoyed his smoke, paid myself for the sudden generosity by stealing the poor old fellow's "sun picture."

In a subsequent article I will picture and tell something of the equally interesting Hopi — commonly called Moki — one of the pueblo Indian tribes of Northern Arizona, whose Snake Dance has made them famous throughout the world.



BY EDWARD W. HEMP

THE HAY BARGE

THE CHEMISTRY OF A PHOTOGRAPH

EXTRACT FROM A UNIVERSITY EXTENSION LECTURE ON THE "CHEMISTRY OF LIGHT," OCTOBER 8, 1891

BY EDWARD BOOTH

Photography is made possible by the power light has in acting on certain metallic compounds. Its action on organic substances is equally noticeable and much more important to man, but this action cannot be utilized for photographic purposes. It is this power of action on organic materials that causes the fading or bleaching of various cloths, the discoloration of paper, and, more important than all, the very life of vegetation. But, while the action is very important, it is not accompanied by color changes conspicuous enough to make photography possible in any such way.

Light acts on many inorganic compounds, and in several of these cases the action is sufficiently marked and rapid to make it possible to secure photographs. This is notably the case with silver compounds, and is so, to a less marked extent, with chromium, iron and copper compounds, and probably a number of others. On metallic silver there is no action. A silver plate exposed to the light for an indefinite period is not affected. But the case is different with many of the silver compounds. Silver is easily acted on by nitric acid, forming a white crystalline compound of nitrate of silver that dissolves easily in water, forming a clear, colorless solution. If a pure nitrate of silver solution be exposed to the light no action takes place. But if organic matter of some kind be introduced into the solution and it then be exposed to the light, it will darken. The darkening is due to the formation of metallic silver and is caused by the light, for, if kept in the dark, such action would not occur.

It is this darkening of nitrate of silver under such circumstances that causes it to be used for indelible ink. It was this darkening, too, that caused it to be the first substance used in photography, for the first photographs were made by soaking a paper in a solution of nitrate of silver and then exposing it to the sunlight, with some opaque object, such as a leaf, laid on it as a negative. The leaf shaded the part of the paper on which it rested, and that part remained white, while all the rest darkened. The result was a white print on a dark ground, and though the result would not be regarded by the modern amateur as notable, yet it was regarded as a scientific triumph by the original experimenters. Had they continued their work and washed out the undeveloped silver compound, they would have pursued, in all essential particulars, the method still used for printing and fixing the print. But they neglected this very necessary step, and, as a result, the parts of the picture originally white gradually darkened, and the picture soon disappeared.

The most notable improvements made in this method were, first, the substitution of silver chloride for silver nitrate, and the washing out of the undecomposed silver chloride in order to make the picture more permanent. The use of the chloride made the paper far more sensitive. The action of the light is the same as in the case of the nitrate, the compound being broken up and a black, metallic silver picture made. The substance first used for "fixing," that is, for washing out the undecomposed chloride, was common salt, but very soon it was found that sodium hyposulphite was far better, and for many years this latter material has been used.

This method of making prints is essentially that in use at the present time. Its important points are the exposure to the sunlight of a sheet of paper impregnated with a silver compound, whereby a picture is obtained in metallic silver, and the subsequent washing out of the remaining silver compound, which, if left in the paper, would quickly darken and obliterate the picture.

There is, however, one other step commonly taken in order to complete the photograph. The silver picture, while a perfect one, as far as all essentials are concerned, has a brownish color not altogether pleasant. To alter this and obtain the effect common in ordinary photographs, the paper is immersed in a solution containing a gold compound, generally the chloride. Metallic silver has the



BY H. G. PONTING

MARIN MARSHES

power of causing the precipitation of metallic gold, and this gold, so precipitated, is of a purplish color, quite different from the color caused by the silver. What takes place in toning, then, is that the photograph ceases to be a brown silver picture and becomes a purplish gold one instead.

The printing of the picture is a simple operation and one of which the chemistry can be easily understood. The preparation of the negative is, however, somewhat more complicated. When the method of printing by means of sensitive paper was in its earlier stages, an attempt was made to use such paper directly in the camera, for the camera had been known as an interesting optical instrument for a century or more before that time. But the attempt proved a complete failure. Long exposure in the camera was in vain. We know now that the paper used was not nearly sensitive enough. Then Niepce, a French experimenter,

started on a new line and one of considerable interest, as showing how many substances are chemically affected by light. He discovered that bitumen, easily soluble in turpentine, became insoluble in that material after exposure to the light. He covered a metallic plate with a thin film of bitumen and exposed it in a camera. Then he washed the plate with turpentine. Where the light had acted the bitumen would not dissolve again, and the result was a light brown photograph, very imperfect, according to our ideas, but of great interest as being the first picture ever taken by means of a camera, by the light coming directly from the object.

Niepce soon became connected with Daguerre, and the two men worked



BY W. L. CORSON

OFF-SHORE

A TELE-PHOTO

together until the death of the former, a few years later. Then Daguerre carried on the work alone and solved the problem. He had soon abandoned the bitumen photographs and had used silver plates covered with a film of silver iodide. This silver iodide is more easily affected by light than is the chloride and so is better for photographic work.

These sensitized plates were exposed in the camera until the picture appeared on them. Then the picture was fixed in the ordinary way by dissolving off the undecomposed iodide of silver, which, if not removed, would soon darken to the same extent as the picture itself. But to make this picture required an exposure of over an hour in the bright light, and, while it could be used for inanimate objects, was unsuitable for living beings. It was by a mere accident that Daguerre discovered that plates exposed for a short time and on which the light had made no



BY A. WORSLEY WINTON

MARSH LAND

visible impression, could be made to show the picture with great accuracy when exposed to the vapor of quicksilver. It was found that the light had really acted on the film, and although the effects could not be seen by the human eye, they were sufficient to cause the condensation of the mercury at those points. This discovery, one of the great ones in the art, made portrait photography possible.

A length of exposure that the modern operator would consider almost impossible was necessary, but portraits could be made, and the old-style daguerreotypes were the result. Daguerre's discovery was regarded as of such importance that the French Academy of Sciences gave him a pension of six thousand francs, on

condition that he made public his method and gave to the world the right to use it.

The chemistry of this process is comparatively simple. It embraced, firstly, the formation of silver iodide, when a polished silver plate was exposed to iodine vapor; secondly, the action of the light on this coating, with the formation either of metallic silver or of a compound of silver and iodine containing a larger proportion of silver; thirdly, the condensation of mercury on the exposed parts; and, fourthly, the washing off of the unaffected silver iodide.

This method, however, proved unsatisfactory and was replaced, first, by the white-of-egg negative, in which a glass plate, covered with a film of white of egg and made sensitive with silver iodide, was used in the camera; and this white-of-egg method, after a short life, gave place to the collodion process, which lasted for thirty years. The only difference between these two methods was that in the second the glass plates were coated with a film of collodion instead of white of egg. In other respects the methods were essentially similar. The film containing iodide of potassium was dipped into silver nitrate. Wherever the two compounds came in contact silver iodide was formed in the film. This plate was exposed in the camera and, long before any visible effect was produced, was subjected to the action of the developer. This, as originally used, consisted of nitrate of silver and some substance, such as iron sulphate or pyrogallie acid, which has the power of reducing nitrate of silver to the form of metallic silver. This metallic silver so formed gathered on those parts of the plate where the light had acted, and soon a picture made its appearance. This action could be continued as long as desired, and it was necessary to stop it when the proper point was reached. Subsequently, the plate was fixed, as usual, with hyposulphite of soda.

The next step was the discovery that if an alkaline solution of pyrogallie acid were used it was unnecessary to add nitrate of silver to the developer; the reducing action of the light on the plate would be continued by the developer until the picture appeared.

The objection to the collodion process was that the plates, requiring considerable



BY H. D'ARCY POWER, M. D.

MONTEREY

skill to make, had to be used at once. So, when the gelatine emulsion method was discovered and it was found not only that the plates were more sensitive, but that they could be kept for a considerable period without deterioration, it was realized that another decided advance had been made. It was the discovery of this process that made amateur photography a possibility; and, as these things react on each other, it is the development of amateur photography that has led to the improvements of methods and apparatus until the art has reached its present position.

There is no essential difference in the chemistry of the latest method and that of the one immediately preceding it. In the gelatine process silver bromide is used where silver iodide was used in the earlier methods, but the action of the light, of the developing and fixing solutions, is the same. A great variety of developers have been used, but they must all have the essential quality of being able to reduce the silver compound to the condition of metallic silver.

A few simple experiments which any amateur photographer can perform will make clear some of the photographic processes. A silver dime, placed in a suitable vessel and treated with nitric acid, will dissolve. The solution will be colored greenish or bluish on account of the copper contained in the coin. It is better to use an amount of acid not quite sufficient to dissolve the whole coin, for in this way the experimenter may be sure that all the nitric acid has been used and that his solution of silver nitrate is free from an excess of the acid.

If a paper wet with this solution be dried in the dark and then exposed to the sunlight, it becomes very perceptibly darkened. It needs an exposure of an hour or more to show the full effects. This was the earliest form of photography.

If three glasses half full of water be taken, and into each a portion of the silver nitrate be poured, they will show no effect beyond a cloudy appearance, due to impurity in the water. If a solution of salt (chloride of sodium) be poured into the first, of iodide of potassium into the second, and of bromide of potassium into the third, a heavy, curdy white precipitate of silver chloride will form in the first, a yellow precipitate of silver iodide in the second and a yellowish white precipitate of silver bromide in the third. These three experiments show how the sensitive plates and papers are made, for each of these precipitates is sensitive to light. If exposed to light they darken, but the darkening is much more perceptible if they be spread on paper first. If to any of these precipitates unacted on by light a solution of hyposulphite of sodium be added it will easily dissolve, while if previously exposed to the light until thoroughly affected part will remain undissolved, illustrating the fixing of the image.

If to another portion of the silver nitrate solution any ordinary developer be added, a black precipitate of metallic silver will form. This shows the action of the developer on the plate or paper. And lastly, to illustrate toning, place a drop of chloride of gold solution on a silver coin and notice the instantaneous formation of the black or dark purple deposit of metallic gold.

There are other methods of making photographic pictures depending on the effect of light on other metallic compounds, giving rise to platinotypes, carbon (or chromium) pictures and blue prints or iron photographs. The operations are not complicated in these methods. In each the effect is produced, as with the silver compounds, by the action of light; and while all are used for printing, none but silver possesses the sensitiveness necessary for use in the camera — for making the negative.

SOME SUGGESTIONS ON "GUM"

BY LOUIS A. LAMB, C. S. A. P.

I have observed that some of the pictorial photographers of the coast are turning to gum-bichromate, and, as an enthusiastic champion of that process, I should like to suggest a few lines of experiment that may prove useful to novices in the art.

The essentials of success in "gum" work are:

First—The use of the least possible quantity of the gum, or adhesive substance, that is consistent with a continuous film on the paper.

Second—The least possible quantity of the pigment that is consistent with the desired scale of values in the print when finished.

Third—The choice of suitable colloids and pigments with reference to the quality of the negatives to be used.

Fourth—The choice of suitable papers with reference to the negatives employed and the colloids used, and the results desired.

Fifth—The use of ammonium bichromate rather than the potassium salt.

My experience leads me to the conclusion that gelatine alone makes the best film for gum-bichromate printing when detail is wanted and smooth paper is to be used, and with "soft" negatives.

That equal parts of soft gelatine and gum arabic solution afford the best film for use with rough paper, and with moderately "hard" negatives.

That pure gum arabic is too soluble for use alone, except with the most "contrasty" negatives.

Sensitize your gum solution before adding the pigment, and use barely enough to give a bright yellow color, adding a drop or so of ammonia water to insure alkalinity.

Dry the coated paper quickly over a fire and expose at once.

If your film is pure gelatine, develop by soaking in hot water from 180° to 200° Fahr. If the film is gelatine and gum, use warm water up to 120° Fahr. If the film is pure gum arabic, use cold water only.

NEW FORMULA FOR TONING PLATINUM

Here is a new and simple formula for toning platinum prints; one that is being used to advantage by the wholesale makers of platinum prints for the art stores:

A

Uranium nitrate	48 grams
Glacial acetic acid	48 grams
Water	1 ounce

B

Potassium ferricyanide	48 grams
Water	1 ounce

C

Ammonium sulphocyanide	280 grams
Water	1 ounce

Use 10 parts each of the three solutions to 1000 parts of water. Wash all prints thoroughly as the slightest trace of iron will be fatal.



A FAMOUS PHOTOGRAPH

This strangely sad and pathetic picture was made by George Edmondson, President of the Photographers' Association of America, at the residence of Senator Hanna, during the first presidential campaign of William McKinley.

It was an unusually happy gathering that night, for Senator Hanna had as his guests Mr. and Mrs. McKinley. The Senator, as cheery as a child, presided at the dinner and occupied the head of the table. Next to him sat Mrs. McKinley, then Mr. McKinley. To the right of the President was Miss Mabel Merriam, daughter of the present director of the census. Then came Miss Mary Barber of Canton, a favorite niece of Mrs. McKinley. At the farther end of the table sat Mrs. Hanna beaming kindly over the guests and acting the part of the hostess. To the right of Mrs. Hanna sat ex-Governor Merriam, the present director of the census, and next to him was Miss Phelps, a warm personal friend of the Hanna family; then came ex-Secretary of War Alger and Mrs. Merriam. This completed the happy little party. During the dinner one of the ladies suggested a flashlight, and Mr. Edmondson was sent for.

At the White House and in Senator Hanna's residence there are copies of the picture handsomely framed. At the Pan-American Exposition, in the Ohio building, there is also a copy of the now famous photograph, which in years to come will form one of the most interesting pages in a history that will live as long as the American nation reveres the memory of a man who gave his life to its service.

STILL LIFE AND ITS POSSIBILITIES

BY F. E. MONTEVERDE
ILLUSTRATED BY THE WRITER

Much has been written upon the advisability of the amateur photographer confining himself to one or two of the manifold applications of the art "if he hopes to become an expert." But why should he, the amateur, so confine himself especially as the object of the average or rather the majority of those who take up photography is not to become experts but more to make pleasurable pastime out of it and with the idea of getting all the scientific enjoyment possible. Why then should they not be encouraged to try all of the many beautiful branches of the art, and if after having gained experience in them, and wishing to become specialists, take up the preferred branch, or the one they have become most familiar with and follow this up? Such, I think, is the common-sense way of looking at the matter, for if we expect all of our struggling amateurs to become experts, then the gods protect us, we should be in time professionally swamped! All would have reached the utmost pinnacle of the art and photography would be at a standstill. To so encourage the amateur is the object of this article, and to give him a start in what, in all probability, is a new field to him. He has tried landscapes, snapshots of his relatives and friends, of his neighbors' dogs and cats, and is really thinking that the much-vaunted photographic art is but a "delusion and a snare" after all. But he has omitted to try one of the most fascinating and interesting applications of photography, still life, one which does not require great exertion, long distances to travel over with a heavy outfit, but just a pleasurable indoor pastime, and one the possibilities of which are great in an artistic sense.

I certainly do not advocate the photographing of single specimens, either of fruit or flowers, which very much remind one of the advertisements of a horticulturist or seed merchant. This is not, properly speaking, still life, for by still life is meant a grouping or arrangement of articles or elements which, in their composition, will produce an artistic picture conveying an idea or suggestion, for therein lies its merit. The objects forming the composition should be as few as possible and bear some relation to each other, so grouped as to make a natural, artistic and harmonious whole.

The use of too many articles, some of them entirely incongruous, and piling them in an inartistic manner, produces a picture which, as an illustration of a junk dealer's window, is an immense success, but as an artistic production is appalling. I wish, therefore, to impress my readers with the fundamental principle in still-life photography — obtain your effect with as few elements as possible, see that they bear some relation to each other as well as to the idea to be conveyed, arrange them simply and you will be more than happy at the result. In speaking of simplicity, I mean an arrangement in which, although much time and labor may have been spent, the completed picture will seem but a natural and unstudied effect, for therein lies the secret of artistic composition.

Nothing I could suggest would help the aspirant in this field more than the study of still life as reproduced by our painters and artists, of which many examples are to be found in public and private art galleries. Before attempting a picture of still life, the first consideration is the idea to be conveyed; the



FRUIT

second, with how few appropriate objects this can be accomplished, and third, the proper arrangement of these objects in relation to each other.

Take the first illustration in this article, "Fruit." We have here but three elements, a bunch of grapes, two or three peaches and a decanter of wine; it needs but a very short stretch of the imagination to read the suggestion or idea conveyed by the picture—a light dessert or lunch, a bit of fruit and wine. There is no incongruity in the fruit lying upon a white napkin. That is logically where fruit might be placed and the wine fills in naturally. Again, the composition in the second illustration may be said to be even more suggestive, yet the elements are few. We have a jug, a glass, some lemons, a box of matches and a cigarette. These articles are not so carefully nurtured but that the polished top of the dining-room table or sideboard are good enough for them to lie upon, and the suggestion here is plain. The third illustration has but two elements, roses and a vase; still, it is suggestive, the vase holding a few of the flowers, the rest carelessly dropped upon the table to be arranged at leisure.

These few examples will serve to illustrate the ideas desired to be conveyed, and it will not be difficult for the enthusiastic aspirant to find many other equally suggestive and pleasing compositions once he has taken it up; for the home contains innumerable articles or objects which, when artistically combined, will prove a source of instruction and pleasure in the production of suggestive pictures in photographic still life.

The best results in still-life photography are obtained by using plates not smaller than 5×7 , and if the intention is to print by direct contact, $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 will be found more suitable, as these sizes, giving a larger image approach nearer to the natural size of the objects, making the picture more realistic. The lens is of the greatest importance, and preference should be given an anastigmat, as it is extremely advantageous in the arrangement of the

articles forming the picture that the lens have great depth of focus, because it permits the placing of the objects in a more natural grouping than has heretofore been possible with the use of the ordinary rectilinear lenses in which there is very little depth. Unless the objects were arranged in almost parallel lines and as close to the front as possible, some part of the picture was sure to be out of focus with the older type of lenses, producing a partly sharp and partly fuzzy picture not at all pleasing to the eye or satisfactory to the worker.

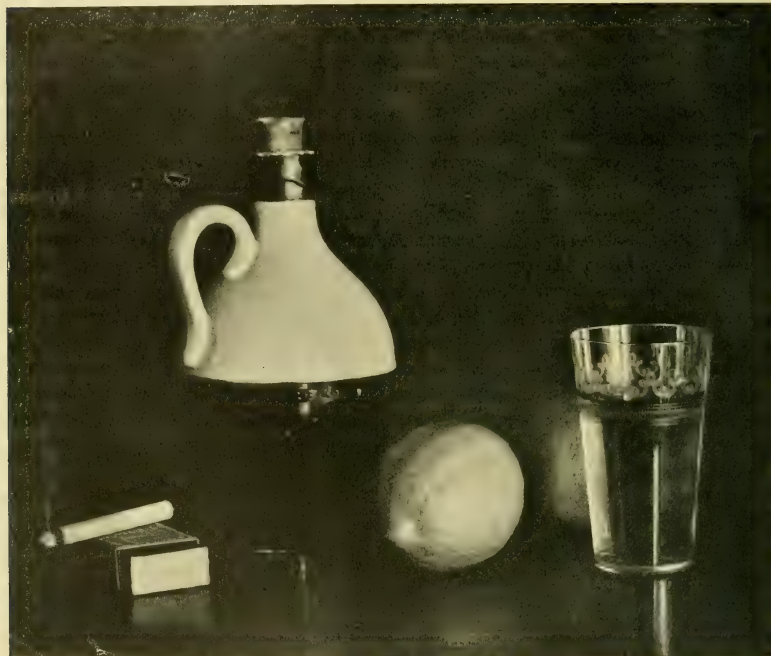
Still, if an anastigmat is beyond your reach and you have a good rectilinear, pleasing pictures may be made by stopping down fine and using a lens of the longest focus procurable, thus giving better definition than is possible with a very short focus lens and a large opening. In general, the plate best suited for this work is a medium isochromatic, and if the objects composing the picture are of various colors, such as exist in fruit or flowers, I strongly recommend the use of the ray filter or screen. For bright objects such as cut glassware or metallic vessels, which reflect much light and where halation is feared, the use of Seed's double-coated plates will give better results and more latitude of exposure than the ordinary plates.

Having determined upon the lens and plate, we now meet the first real obstacle, correct exposure. Should you not already be the happy possessor of a photometer, I should certainly suggest the purchase of one of these really indispensable adjuncts to successful interior photography. There are two or three good meters in the market. I personally prefer and use a Wynne meter, for it is accurate, extremely simple and easy to read. With this in hand you will be enabled to gauge the light and determine the correct exposure of the plate under any conditions of time and locality, not forgetting, however, that in using the ray filter or screen the normal exposure must be increased to counteract the retarding effect of its use. In the use of the standard ray filter



CALIFORNIA BEAUTIES

(Bausch & Lomb), which is the one I use, I have found that the normal exposure multiplied by three, or, if the light is very poor and the objects very dark, even by three and a half and four give good results, if in the development of the plate this fact is borne in mind. In using non-halation or other non-orthochromatic plates, the ray screen should be dispensed with, as the exposure necessary in this case to obtain any differentiation of color would be impractically prolonged. In the development of the plate it should be borne in mind whether it is intended for printing by direct contact on carbon tissue or platino-type, or for printing by enlargement upon bromide papers. In the first case, a



LEMONADE

softer negative is best, and in the second a sharper and stronger one is preferable, for in the projection of the enlarged image upon the paper we are enabled to soften it to any degree required.

In the development of isochromatic plates, I would suggest the use of the metol-hydrochinon formula of the plate-makers; for the non-halation plates, Seed's 1900 two-solution formula of metol-hydro and carbonate of potash, diluted about three to one, which gives clear and bright negatives. Of course, the old-time pyro can be used, but I see no reason why an amateur need stain his hands with pyro when there are many other new developing agents which give as good results with clean hands.

A few words upon the manner in which the negatives used to illustrate this article were made may prove helpful. The plates in all three were medium

isochromatics. In the fruit and also in the flower negative a Bausch & Lomb ray filter was used, the lens being a convertible Zeiss VII. A, 7-inch focus, stop 32, exposure 45 seconds, developer metol-hydro. In the second negative, jug and lemons, the back combination only of the lens was used, giving a focus of 11½ inches, without the ray filter; time of day 11 a. m., stop 128, exposure 50 seconds, developer the same. The single combination of the lens was used in this case in order to obtain an even definition and still have the objects as large as possible upon the plate, the larger focus enabling the camera to be placed further from them and still obtain as large an image as desired, in this case covering the 5 x 7 plate upon which it was taken.

The most appropriate prints for this class of work are those made upon platinotype or carbon tissue, the latter giving a variety of colors, which, if judiciously selected, enhance the beauty of the picture. A very near approach to a platinotype can also be made upon some of the best developing papers to be found in the market, which, from their cheapness and ease of manipulation, appeal to the non-professional.

A NEW DEVICE FOR DEVELOPING FILMS

BY FAYETTE J. CLUTE

Even the staid old-timers that could never quite come to using film cameras are carrying around one of the pocket editions when out for the day. I saw a funny-looking little glass trough in the darkroom of one of these fellows the other evening, and a few questions cleared up matters. He was using a pocket camera, and so he got a few strips of glass at the glazier's and made this trough. Two long strips formed the sides, one long narrow strip and two shorter lengths formed the bottom and ends. These, cemented together, surface to surface, formed a trough long enough to take half the spool, as deep as the film was wide and as wide as the thickness of the strips of glass used for the bottom and ends. The film is put in as one would slide a card into an envelope, and, the trough being transparent, development can be watched by holding the whole thing up to the ruby light. The glazier is glad to get rid of these strips, and a request will cause him to save you out just what you want. The cement my friend used is made as follows:

Twenty-four parts of fish glue and five parts of whiting are dissolved in thirty-two parts of water-glass (silicate of soda), and well mixed in a mortar. Apply this to the surfaces to be united, binding the parts well together by means of a clamp or cord, and dry in a warm place.

This cement is also excellent for broken dishes, flower pots and the like, so that what is not used in making the trough may be turned to good service in the household.

OVERCOMING A DIFFICULTY

Many amateurs in possession of a fixed focus camera, says *Photography*, have doubtless found a difficulty in obtaining a photograph of some object in a room through being too near to it. This difficulty can often be overcome by placing a large mirror in front of the object, and the camera in front of the mirror. Avoid the camera being reflected in the glass by standing a little on one side.

PRINTING AND MANIPULATION OF VELOX PAPER

BY EDWARD W. NEWCOMB
IN THREE PAPERS — SECOND PAPER

Select such paper as will afford the results you desire: have two or more kinds at hand and then the exigencies of any conditions can be coped with successfully. In printing it is much easier, even in the daytime, to print by lamp, gas or electric light as that does not vary as daylight does, and in the following descriptions I shall assume that an ordinary four-foot gas burner is used.

Under a suitable shade in a slightly darkened room, by daylight or at night, and in one corner away from the lights, we fill our frame or frames. There may be abundant light to see by but do not overdo it a particle. The paper will behave best if not exposed to as strong light as it will stand. Having filled the frame, placing the emulsion side of the paper against the face of the negative (a test is to moisten the finger tip and apply to a corner, the emulsion side will be sticky), we are ready to expose. Walking to the light we expose at a distance of about a foot, for, say, twelve seconds, moving the frame laterally the while so that the exposure shall be even. If the light has no globe a sheet of white tissue paper should be hung before it: perhaps it had better be if it has a globe so as to secure diffused light.



BY OTTO VON BARGEN

FLYING HOMEWARD

Let the exposures go on, if the time is known to be correct, until a dozen are exposed. Make test exposures on small slips if necessary. It is well to fill a number of printing frames while at it, but only one should be exposed at a time.

If it is desired to favor any portion or vignette or print in clouds, the task will be a mere nothing as compared with the labor involved in doing such work on paper requiring a long exposure. By using a square of cardboard, with a suitable



THE HISTOLOGIST

opening in it, we can favor certain dense portions so beautifully as to make detail appear at any desired spot. If there are clouds in the sky it will not do to expose the whole negative long enough to print them, but, with a roughly torn piece of strawboard, we can cover the foreground after, perhaps, twelve seconds' exposure, and give the sky any required amount of extra exposure, moving the card up and down the while so as to leave no mark at the horizon line. In the same way we can favor white objects, faces, water or other spots which require additional exposure.

Vignetting can be exquisitely managed by the use of a card with a suitable opening. This should be moved to and from the negative, during the exposure, through a distance of three to six inches. The moving to and fro produces the most perfect blending that could be desired.

Many devices for changing the values in the print are

accomplished during the exposure. There is a wrong and a right way to do each print to get the full value from the negative. A dense negative, for instance, may be printed as near to the lamp shade or diffusing screen as it can be held, while a thin one is best if exposed four feet from the light if a proper increase of exposure is made. So trifling a matter as slanting the frame so that the upper part is several inches nearer the light than the lower will equalize a heavy foreground and bring out a sky. Negatives often have pretty strong contrasts, such as sky and grass or trees, dark clothing and white faces or some such thing, and although velox takes care of the shadows wonderfully it cannot be expected to hold the detail in the shadows during protracted development for detail in the light portions. We have to help by favoring the denser portions, and the printer should always be well supplied with sheets of strawboard in which to roughly cut out holes so that the light may shine through upon the dense spots, while the properly exposed portions are kept shaded.

It is advisable to use red or black masks on the negatives so that when the desired portion is printed it may be trimmed so as to show a white border of,

say, one-sixteenth of an inch. This is very effective, especially if the print be mounted on a dark-tinted mount. Thick paper should not be used to make the marks or cutouts from, as it, of course, prevents contact with the negative. If a picture be *too sharp*, however, and no rough paper is at hand, a mask of thick paper will diffuse the sharpness very pleasantly, or if printing with no mask, two or three sheets of celluloid film with the emulsion removed will produce the same effect. One thickness of thin film produces little diffusion and can be used to cover a wet negative while making a print if one is in haste. If one cares to, the frame can be covered with white tissue paper and when the negative is in place, light dabs of gamboge wash can be applied to the paper when a shadow needs some restraining. It is well to do all necessary dodging in the printing as it is easy to do then, and as the print is better for quick development, there is not as good a chance to favor spots in developing as in printing. Let the beginner remember, if he finds his prints quite contrasty, that the remedy is before him in abundance and consists of nothing more than a little extra exposure directed upon obstinate portions through a hole in a square of strawboard. With a strip of the same useful material he may also shade out poor skies from a negative entirely and then, by using another one having good clouds, shade out the foreground of that while its clouds are being printed upon the paper. Combination printing is also very speedily accomplished with this quick printing paper so that, providing one makes the masks accurately and imposes them correctly, a half a day's work on printing-out paper may be done in five or ten minutes on velox.

When the necessary number of properly exposed prints are ready to develop, the developing solution should be poured in a clean tray, the acid hypo (made an hour before) should be at hand, while a third tray of pure water will save trips to the wash tank at the sink. No better chemicals could be asked than those prepared by the makers of the paper, as they are pure, carefully prepared and calculated to produce the best results. Other developers will do, but it is reasonable to suppose that the chief chemist of the velox concern knows better what is good for this paper than we do ourselves. He has tried everything and his mixtures are simply the result of an expensive series of experiments that we are spared the making. Metol-hydroquinone yields the velvet black tones we so admire in a good velox, and either that prepared by the Nepera Company or one carefully prepared ourselves will be advisable at first if not afterwards. The formula accompanies each package so it need not be given here.

I have, myself, used a simpler developer for two reasons, it affords a fine blue-black result and, as it has no alkali, it is not apt to harm the gelatine or stain. It is simply amidol, sulphite of soda and water. A mustardspoonful of amidol, two or three of sulphite and four ounces of water comprise the whole outfit, and as it is readily prepared and answers my purposes well, I am inclined to stick to it. The amount given is not very strong (the quantity of amidol and sulphite can be doubled if required) and will not develop so many prints as the same amount of M-Q, made per formula advised, will. Still, it is cheap, easy to replenish when its strength seems impaired and it yields a colder black than M-Q, so it has advantages.

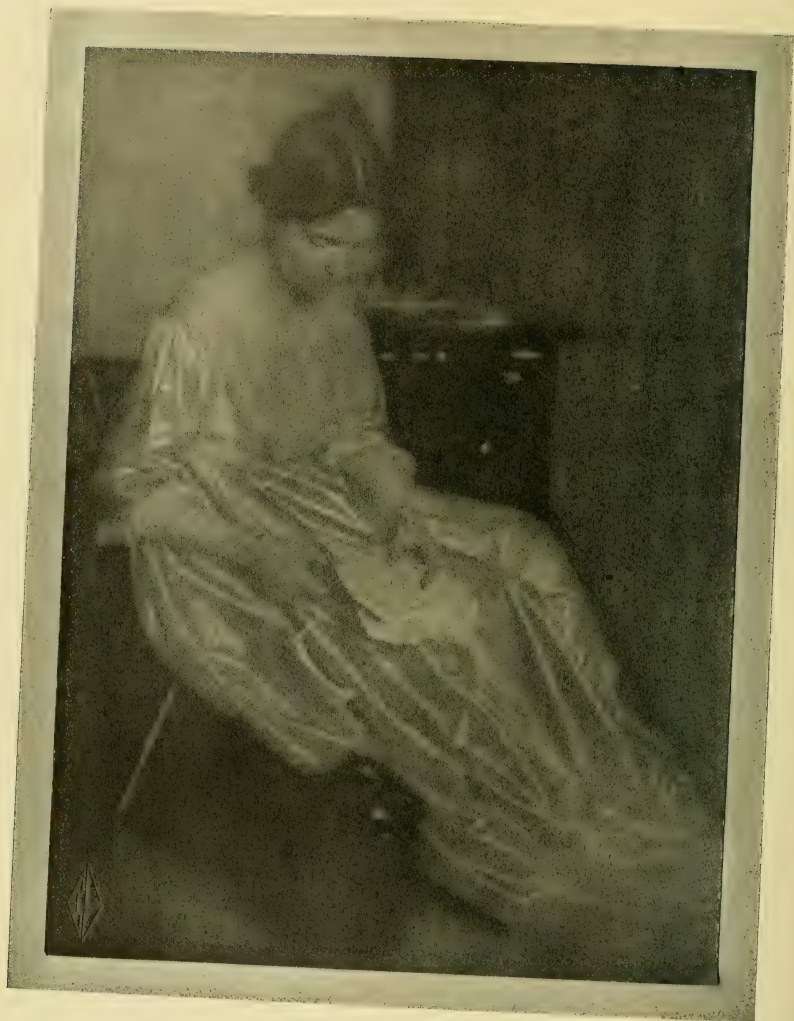
It is customary to wet the prints in clear water, plunge them in the developer and rock till full detail is obtained, rinse and throw the print into the acid hypo. This procedure yields proper results unless local development is needed and may be safely followed. One must not forget to keep the prints in the hypo tray quite

submerged and frequently stirred about, else yellow stains and imperfect fixation will result. Plain hypo will fix the prints but the acid hypo is far better and should always be employed. It is best to throw the hypo away after use, especially if its strength is impaired. To determine if the prints are fixed cut a dry plate up into small bits; drop one in with the prints and allow it to fix completely, then use one more to make doubly sure, and if the prints have been stirred about properly they can be depended upon as fixed and permanent. The next matter is the washing, and that is merely a matter of so much time and running water. Velox prints wash free of hypo in fifteen minutes if they have running water constantly and turned about frequently. The old permanganate of potash test for hypo can be applied to the drippings if one cares to be particular, but it is hardly necessary.

With velox the use of much bromides tends towards olive blacks and is not advisable, still we often wish to develop slowly so as to control the result better. In suggesting the addition of sugar to the developer Dr. Burkland gave us an excellent means of control, and one or more teaspoonsful of granulated sugar to each four ounces of developer will be found a serviceable check to rapid development. This syrupy developer does not penetrate the film on the paper nearly as fast as plain developer would, hence the action is slow and most governable. I like to lay a wet print on a sheet of glass and use sugar developer with a wide camel-hair brush. In this way I can produce endless local effects by breathing on spots, using a stronger developer here and there and slowing up parts that are going too fast with water or even the finger tips after dipping in hypo. Overdone local brush development never appealed to me, but many enjoy it and produce work having a sketchy look that is not displeasing if done by a true artist. One can leave out just as much as he chooses by brushing weak developer on a print that has first had a preliminary bath in the sugar solution, and when the outlines begin to be indicated the strong developer can be brushed on when needed. The use of a wide brush, with either strong or modified developer, I heartily approve of, as the wet print on a glass can be easily covered without causing bubbles and each application is fresh developer—a decided advantage. Developer thus applied is most economical as one only spoils just what is needed for the prints at hand. I noticed that the men at the factory started their prints with a brush and finished them in a tray of developer.

I think the exposure is vastly more important than the development, for if the former be right, the paper *can't* go wrong if the developer is fresh, sufficient and properly compounded. Don't forget the bromide; a little of that chemical is as essential as any other of the components, though too much is sure death. Keep prints, at all times, covered with developer, and afterwards, in the hypo, be fully as careful and do not let them lie one upon another very long while fixing. When washed they may be hung up or laid face up on a Turkish towel to dry, or if a glossy finish is desired, abominable as it is, the print can be squeegeed upon a ferrotype plate and left there to dry and then peeled away.

Beautiful and permanent as are black and white prints made with M-Q or other developers, the most casual observer will note that black and white is not always as effective as some colors would be. We often feel the lack of a warm tone for a portrait, a green or blue for a marine, but many are doubtless unfamiliar with the fact that such tones may be secured with ease. In the next article I will tell of the possibilities of velox in this direction.



THE PATTERN
by EDMUND STERLING
At the Chicago Salon

TWO IMPRESSIONS OF THE SECOND CHICAGO PHOTOGRAPHIC SALON

A BRIEF CRITICISM BY DR. F. DETLEFSEN
TOGETHER WITH SOME OBJECT LESSONS
BY ROBERT CRAIK MCLEAN

Among those who have viewed both exhibitions, the last year's and the present, there is but one opinion as to the vast improvement shown in the work hung today. It is an exhibit by earnest and talented workers, not belonging to any particular school, and particularly free from fads and speculations; in fact, it is strong, straightforward work, showing in many instances a degree of originality and self-consciousness which is quite remarkable. The influence of an exhibition of this kind, full of suggestions to the close student of photographic art, cannot be overestimated. A great deal of praise belongs to the judges, who have performed their arduous task admirably and justly.

Contributors to the present salon hail largely from the West. The California Camera Club is particularly well represented and the work shown by its members is highly creditable in every respect, remarkable for originality and great artistic qualities, unsurpassed in technique, mounting and framing. The work of Miss Laura Adams is much admired because of its strength and originality. Her large heads show feeling and power combined. "Peace on Earth" is a fine composition. Dr. A. Genthe's "Head and Hand" is an excellent study, a triumph of modern photography. Oscar Maurer shows a strong, impressive landscape which does credit to the artist. George C. Meeker's "Passing Shower" is remarkable for its fine tone values. F. E. Monteverde's "Fish Cleaner" has received much favorable comment from the artists; his "March" is quite original. "A Philosopher" and "Ursula" of Dr. H. D'Arcy Power, two small heads of great charm, are perfect in technique. Walter A. Scott's landscape is very good, his "Tangled Meshes" still better in its unconscious pose, but an "Interesting Moment" leaves much to be desired; it is rather hard in lighting and shows sky and water blank, and of an equal tone. W. J. Street's "Passing of the Storm" is admirable in composition and of great strength, but the water looks rather flat, without depth. This slight defect, however, detracts very little from the beauty of the print. "At the Wharf" by G. Knight White is a splendid piece of work and excellent in tone.

Among the Easterners, C. Yarnall Abbott shows good examples of his well-known work. Prescott Adamson's "Midst Steam and Smoke" is fully appreciated. H. A. Beaseley's "Peace" is, to my liking, the finest seascape of the salon. Mrs. Elise Pumpelly Cabot has two good portraits. A much-admired print is S. Hudson Chapman's "In the Refectory" with its unconscious poses and fine light effects; his "Net Makers," however, are less at ease, although grouped well. "La Siesta" is very fine. Miss Essie Collins' "Ophelia" is a dainty production and shows fine lines. Dr. M. H. Cryer's "Afternoon on the Lake" is very good. F. Holland Day shows seven of his well-known prints, most of which betray the artist's master hand. The elaborate gilt frames, however, strike less favorably. "Portrait of My Nephew" by Miss Mary Devens and her "Young Tasso" are excellent productions. "The Pier," to me, is meaningless.

Sky and water are of a clear, even white; no horizon is visible. L. S. Gans' "Mid Fog and Ice" is considered very fine in tone and effects. S. Stockton Hornor's landscape is quite good; his portrait "Caroline" is not out of the ordinary. "Evening" by Geo. F. Kunz is fine. Francis Watts Lee has three good portraits. His "Convalescent," however, is too faded and rather strained in pose. J. Ridgway Moore's three landscapes are delicate and of fine lighting effects. M. McNaughton's sheep studies are good and strong; his portrait "Sara" is finely modeled. J. Dwight Palmer has a good picture of roses. W. B. Post's winter landscapes are perhaps the best works of their kind in the salon, although the footprints in "Intervale in Winter" look rather "faked."

Miss Virginia M. Prall, in her six prints, shows bold lines, fine light effects and a strong originality. In "Consolation" the child looks rather small in proportion and badly tangled up with limbs and arms, more like a human embryo than like a child in distress. "Guardians of the Doge's Palace," by Garrett L. Reilly, is an admirable piece of work; his "March" shows fine effects by simple means. Mrs. Wm. E. Russel's gum print "By the River" is good in composition, though somewhat misty. Mrs. Sarah C. Sears has two good portraits. Edmund Sterling's two studies are very original. Henry Troth's six prints show him a master in landscape work. F. J. Von Rapp has one good portrait and a very delicate landscape. Henry S. Williams' sheep picture is well composed.

Of other exhibitors Arthur E. Becker has a fine showing. His figure studies, portraits and landscapes proclaim him an artist of great ability. J. H. Field has four good landscapes accepted, of which "Showery Weather" is perhaps the best. Frank Green's "From the Bridge of Rush" is one of the best productions of its kind. Chas. K. Huguet has a good yacht picture. Chas. H. MacDowell's "Homeward Bound" is delicate in tone and finely executed. Wm. A. Page's "April" is a masterpiece. Mrs. Eva Lawrence Schuetze, nee Watson, upholds the standard of her well-known work in four excellent prints. Mrs. Myra A. Wiggins' "The Babe" is very favorably criticized. "The Pumpkins," by Arthur W. Wilde is a study par excellence. Miss E. Brownell's "At Close of Day" is a very good landscape. Her "Edward" might be improved by a darker frame. The Chicago Society of Amateur Photographers is represented by E. M. Blaine, Edward Lavelle Bourke, F. S. Crowell, F. Detlefsen, Wm. B. Dyer, Wm. P. Gunthorp, Geo. H. Hazlitt, Wm. F. James, Herm. Knutzen, Louis A. Lamb, H. B. Parker, Frank Snyder and Wm. L. Whitson.

BY ROBERT CRAIK MCLEAN

The Second Salon of the Chicago Society of Amateur Photographers cannot be said to have shown any special advance in art, but it certainly demonstrated that photographic pictures can be judged purely upon art lines, and still retain a speaking acquaintance, at least, with the medium.

The judges were selected from among the most prominent artists in the country, only two of the five having any practical knowledge of the camera; and as each occupies a different field in art, so the exhibition partook of this variety, and the walls exhibited a collection that in medium and in purpose ran the entire gamut of photographic picture-making, from the red and elusive gum bichromate to the sharp and finely drawn print from the crispest of negatives.

But they all exhibited, to a greater or lesser degree, that combination of composition, tone values and atmosphere that is expressed when we use the word "picture." I do not mean to say that I was pleased with all that I saw, for in some those qualities were lacking that, as an individual, I must find in order to be interested; but in the exhibition there were pictures for everybody, and as the purpose of these salons is so largely educational, each could find, in the highest development, some pictures that spoke the language that he understood, and was benefited.

It is with great satisfaction that the writer noticed that the recent tendency towards brush work advocated and practiced by a few, has not made the impression upon the artists in our field of work that we all have had good reason to fear. Relegated to its proper place, and used as a medium of expression by those who are not only skilful enough, but wise enough to control it, the brush may hold its place, and its results still be seen in our exhibitions; but the field of composition and proper development, and the ordinary work that goes to the making of a successful picture with the camera is so large that there is little wisdom in taking up another branch of the work that at best is no improvement, and at its worst is "the worst ever."

Another thought that this exhibition places before the observer, is the need for more work in genre and less in landscape. This may be a purely personal feeling, rather than a broad truth; but it seems that the work of the camera should be particularly expressive of that quality that we have learned to call "human interest," the vital spark that illumines the picture and tells the story. In the oil painting it is not so necessary that this quality should be part of the composition, for there is the color to give it expression; but in our gray or brown shades, this is so largely lacking that it needs drawing and form to give it that attractive quality.

The Chicago salon has a wider significance than the mere hanging of so many prints upon the walls, for it shows distinctly the advance that art has made in less than a decade. The Art Institute of Chicago is the largest educational institution in the country, and under the most conservative management, and when it opens its galleries to the exhibition of photographic work, it signifies that the camera in the hands of an artist is capable of producing pictures that rank equal with those of the etchers, engravers, and other monochrome workers in the world of art.

The judgment of the jury in this salon was placed upon a very high degree of excellence, and out of over nine hundred prints that were received only one hundred and thirty were accepted and hung, and a casual inspection of those that were rejected showed plainly how severe must have been the inspection, but on the whole, how honest and impartial; so that those whose prints were accepted may be sure that they possessed those essential qualities that art demands in a picture in a high degree; and those whose pictures were returned may be assured that the judgment was not only critical, but capable, and that there were inherent violations of some artistic canon that turned their pet creations to the wall.

The work of the Westerners, strong and full of individuality, was a distinct feature of the exhibition and in future salons will be looked for with interest, promising as it does an atmosphere that could only come from beyond the Rockies.

CAMERA CRAFT

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No. I

THE
PHILADELPHIA
SALON

Every indication points to a very creditable showing from Western workers at the Philadelphia salon, and the impression made upon those who saw the magnificent array of California pictures at Chicago will be duplicated in the Quaker City. In the first Chicago salon but one Californian exhibited.

This year nearly twenty per cent of the total number of prints accepted were by California workers. CAMERA CRAFT is proud of this showing, which it cannot help but believe is due in part to its influence.

The most complete set of pictures of municipal life ever gathered is now in the possession of the California Camera Club, and there is not a nook or corner in the San Francisco of today which will not be open for inspection long after the actual scenes have disappeared.

ON SALON
IMPROVEMENTS

Several of the best writers on art subjects in the East have recently been discussing the possibility of improving the salon methods as they exist today and, without suggesting decided remedies, give voice to a thought that has doubtless

struck every visitor at recent picture exhibitions. For instance when a visitor at the First San Francisco Photographic Salon entered the immense Searles Gallery in the Mark Hopkins Institute he was confronted by hundreds of pictures strung along the wall without the slightest effort to segregate that which was good from the much that was bad and with absolutely no attention paid to style, subject or classes. The result was to impress the visitor not with the beauty of the individual prints but to awe him with the abundance of material. Hence it was that the student who attended the exhibition was confused and carried away with him none of the spirit which the salon was supposed to give him, profiting little and in the end giving little credit to those who worked for the success of the show.

This year it should be different. The lines should be rigidly drawn and only the work that passes the closest scrutiny should be admitted. With the resulting material the utmost care should be taken to place it in the most favorable light before the public and the student. Every opportunity to give variety to the exhibition should be accepted even to the placing of suitable

backgrounds for the different classes of pictures. Originality in placing the exhibits and in fact every possible chance to favor the appearance of the individual print and the exhibition as a whole would assist materially in creating an impression on those who see the show that will aid in placing the Photographic Salon at the head of art events on the Pacific Coast.

Our contemporary, "Photo-Era" of Boston, has been the victim of a very bad pun, the perpetrator being "Photography" of London. "Photography" alleges that notwithstanding the fact that the gentleman who furnishes the regular "London Letter" for the "Photo-Era" lives in the country many miles from London and seldom mentions London affairs, the letter is a "Lund'un." If "Photography" had said that the letter was a "Lame'un" we could more readily agree with it.

A writer in *Photographic Light*, commenting upon CAMERA CRAFT'S stand in the matter of exacting a camera tax from the EXTORTION amateurs who intend visiting the Louisiana Purchase Exposition in 1903, says:

The photographic concessionaire at an exposition is a poor sample of philanthropy as well as being of amazingly poor commercial value to the fair treasury. His work is ground out with one object in view only — make them *cheap*, the public will not buy them unless they are; the prints, as a consequence, are no good in point of permanency as has been clearly proven by prints purchased at the World's Fair in Chicago.

Under the circumstances, if the management of the St. Louis Exposition will adopt a broad and liberal policy toward the photographer, throw down the gates, and let it be known they are down to every person who wants to take pictures of what he or she has seen, the effect would without doubt be so far-reaching that it would eventually double discount the profit to the fair through the channels of making a concession of this branch.

The argument of this writer is logical and convincing, and CAMERA CRAFT is more than pleased to note the general support it is receiving throughout the United States in the fight for justice.

Directly after the title page of Henry van Dyke's new book, A WRITER'S "The Ruling Passion," which has just been published by Scribner, REQUEST appear the following lines, headed "A Writer's Request to His Master":

Lord let me never tag a moral to a story, nor tell a story without a meaning. Make me respect my material so much that I dare not slight my work. Help me to deal very honestly with words and with people because they are both alive. Show me that as in a river, so in a writing, clearness is the best quality, and a little that is pure is worth more than much that is mixed. Teach me to see the local color without being blind to the inner light. Give me an ideal that will stand the strain of weaving into human stuff on the loom of the real. Keep me from caring more for books than for folks, for art than for life. Steady me to do my full stint of work as well as I can; and when that is done, stop me, pay what wages Thou wilt, and help me to say, from a quiet heart, a grateful Amen.

Let every photographer who reads this ponder over the thoughts the writer has so sincerely expressed and then let him apply it to his own work, for in it there is much to think of.

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK

CONDUCTED BY H. D'ARCY POWER, M. D.

VALUES IN PICTORIAL PHOTOGRAPHY

Burchett, the painter who devoted himself to photography and originated the platinum-glycerine development process, recently gave a lecture before the London Camera Club on lighting and values. He insisted that these factors were at least as important as linear composition, and that the contrasts between high-lights and half-tones were too much neglected, and that to obtain the best results it was often necessary to accentuate differences, just as is practiced in painting. In platinum prints the shadows are really only half-tones, as may be demonstrated by making a mark with a crayon thereon. Finally, masses are more important than details, excess of the latter detracting from the effect of the mass.

ART AND PHOTOGRAPHY

The salon season is once more on, and the usual controversies as to the position of pictorial photography are again with us. However, it is to be noted that they have lost much of their past acerbity; moreover, the new school is everywhere triumphant. The battle for freedom of method is undoubtedly won, and judges are concerning themselves solely with results, without regard to how they are obtained. The "pure - photography" cranks are less blatant, and the quality of the recent exhibits is everywhere improving. That this is so is evident from the testimony of the public press and the art journals. *Brush and Pencil*, in a thoughtful and critical article by Louis A. Lamb on the Chicago salon exhibit, frankly admits the newly acquired position of photography as a member of the fine arts, a new exponent of subjective as well as objective beauty; and the pages of the leading American art journal are adorned with reproductions of the salon exhibits. The London *Times*, conservative as it naturally is, commenting on the pictures at the London salon, says:

Though the majority of the works shown at the Dudley Gallery may fall short of finally disposing of the question, "Is photography art?" this much must be admitted, that the prints there shown compel the readjustment of one's ideas as to what photography is capable of doing. There is practically nothing

amongst the three hundred pictures shown which can be described as "photographic," using the term in the conventional sense; and it may well be that the uninitiated visitor will be incredulous as to the purely photographic nature of much that he sees, for it is apparently only in the hands of an artist that photography's artistic possibilities begin to be realized. If we think of photography as a merely mechanical reduplicative process, the work of Dr. Hugo Henneberg, for instance, compels us to recognize that every separate print must of necessity be individual, and is such a free, yet withal pleasing, interpretation of nature that there seems no other category but fine art under which it can be placed.

After referring in detail to many of the works exhibited, the *Times* observes, in conclusion, that

These and many another seem to have so far emancipated the photographic method from the fetters of the merely mechanical that, given a more intimate acquaintance with nature, a better appreciation of tone and a fuller knowledge of all that goes to constitute art, it would be difficult to deny to some examples of photography at least that position to secure which the Photographic Salon has zealously striven.

These comments show that the progress of the pictorial workers is sure. The ever-increasing use of the gum-bichromate method is proof that much of our past stagnation was due to the trammels of a non-plastic technique. Nevertheless, old dogmas die hard, and the art critic, Mr. Anthony Guest, recently discussing the field of photographic art, has raised the old fetich of pure technique, as though technique were something more than a means to an end.

DARKROOM ILLUMINATION

Some months ago I described in *CAMERA CRAFT* a light-filter lantern that I and many others have used with increasing satisfaction. For ordinary plates, saturated solution of potassium bichromate was the fluid used, for orthochromatics a solution of lithium carmine and picric acid. Recently Mr. W. S. Davenport recommended a solution of mandarin orange extra G (made by Gruber & Co., Leipzig) for this purpose. A correspondent to the *British Journal of Photography* writes that he procured this dye as

made by the Berlin Company and could not dissolve it. About two months ago I tried to get this dye in San Francisco, but failed. I obtained, however, mandarin orange O. Of this I made a one-in-a-thousand solution, and find that, with a single candle, it gives an excellent light, quite safe for iso plates.

WARM-TONED BROMIDE PRINTS

Some months ago *Das Atelier des Photographen* published a process for obtaining warm tones by development, which was substantially as follows:

The bromide paper was given an exposure considerably over the normal, and was then treated with a developer containing, instead of the usual potassium bromide as a restrainer, potassium chloride. Under these circumstances, the print, it is said, instead of black, develops a more or less warm brown color, according to the exposure given and the developer employed.

This developer is made up from three stock solutions. The first is the ordinary saturated solution of potassium oxalate. The second is one which contains in each ounce of liquid twenty grains of iron sulphate, two grains of citric acid and two grains of potassium bromide. The third is a solution of potassium chloride of a strength of sixty grains to the ounce. The developer is made up by adding one part of the second to four parts of the first, then adding one part of the third for good sepia tones.

If the tones required are warmer than this solution yields, the exposure may be increased, it is said, and the proportion of the third solution (potassium chloride) increased also, or *vice versa*.

It is clear, however, that a point would soon be reached beyond which it was impossible to carry the addition of potassium chloride solution without precipitating some of the ferrous oxalate, while were the potassium chloride present in the developer to a very great extent, its solvent action upon silver bromide would have to be reckoned with.

FADING OF THE LATENT IMAGE

It is generally imagined that we can develop our plates any time we please after exposure, but the following summary of some experiments of Herr Gaedicke (*English Amateur Photographer*, October 4th) shows that there is a limit to this delay:

"Much has been said as to the gradual weakening and final disappearance of the latent image, but, as far as we know, there

have been but few careful and systematic researches on this subject. The most recent investigations are those of Herr Gaedicke, who, some two years ago, exposed a number of similar plates (gelatino-bromide, with small proportion of iodide) under a sensitometer screen. The plates were then wrapped up in paper, the paper not being in contact with the films, and the packages were enveloped in a waterproof covering. Sample plates were taken out from month to month, and at the end of two months a slight fading of the latent image or retrograde action was noticeable, and in six months' time there was a very considerable fading of the latent image. After the exposed plates had lain by for eighteen months, the fading of the latent image was still more noticeable, but, so far, no complete fading away of the image has been observed. Unexposed plates preserved under the same conditions as the exposed plates did not gain in sensitiveness, but they gave less intense and more harmonious images. The film also became harder and was less readily penetrated by the developer, this hardening beginning to be noticeable about the end of the fourth month. It must be obvious that Herr Gaedicke's experiments in no way elucidate the fundamental question whether the latent image has in itself a tendency to disappear or become weakened with time, as distinguished from the question of the action of external agencies on the film. To elucidate the fundamental question it would be necessary to preserve exposed plates under very various conditions. Probably the condition most removed from external disturbing influences would be that of an exposed plate kept in a glass vessel coated on the inside with emulsion of the same kind as used for the plates, and exhausted as completely as possible, the glass vessel being preserved in a thick leaden box. From a practical point of view, the question resolves itself largely to a careful study of the various influences which various supports and various packing materials may have on the latent image. Speaking generally, ordinary or halogenizing influences are very immediately destructive to the latent image, and mere traces will weaken the image rapidly. An instructive illustration may be gathered from the practice of the daguerreotype of fifty years ago. If a sitter moved or the pose was unsatisfactory, the plate was once more taken into the darkroom and placed for an instant in the iodo-bromine fuming box. The latent image was thus instantly destroyed and the plate was ready for

another exposure. This could be repeated a great number of times, the only limit being the over-halogenization of the plate, a remote probability, considering how easily the latent image is destroyed."

GUM-BICHROMATE PRINTS

In the July number of the *English Amateur Photographer* Mr. H. M. J. Underhill makes a lengthy and formal attack on gum prints, concerning which he says: "I have no special objection to gum-bichromate beyond the fact that, as I see it, in most people's hands it falsifies perspective, both aerial and linear; it spoils accurate drawing and it exhibits, to a distracting degree, the incongruity of hand work upon lens work." Nevertheless, he admits that, so far as the work of its great modern apostle is concerned, this is not so, and for M. Demachy's work he has nothing but praise. It is the use made of it that calls forth his criticism, and he says:

I do not wish to raise any side issues. I want to attack gum-bichromate in what is called its chief merit—in the power which it gives the photographer to "control" his prints. This is its central vice. The argument runs thus: The painter-artist "controls" his pictures just as he likes and produces what results he pleases. (Does he?) Gum-bichromate gives complete "control" of the resulting print; therefore, it is the process for the photographer who wishes to produce "artistic" prints. The conclusion is a *non-sequitur*. Most photographer's prints are only tolerable because they cannot "control the results," and the forgotten thing which vitiates the argument is that the "control" of the painter-artist is the control of knowledge, while the control of the photographer is the control of ignorance. An artist has so trained his eye to see and his hand to execute, that whilst he has "perfect control" over his "results," he yet produces a picture which is *true* to (not an exact copy of) nature. The photographer, in the first place, sees very imperfectly, so that his eye is satisfied with something quite unlike the original; and, in the second place, he cannot make his materials do quite what he likes—except, perhaps, M. Demachy.

Now, while I entirely disagree with Mr. Underhill as to the demerits of gum printing, I hail his criticism as useful. The fact that he admits that M. Demachy produces gum prints that he "admires immensely," shows that the process *can* produce beautiful results. But, says the critic, other men fail because they are not artists; their control is made in ignorance and the result is a hybrid hash. Much of this must be admitted as true. Gum printing is difficult in technique, and unless the worker has had some art training and can draw and shade, he can hope for

little else than failure. The pigmented surface from which the picture is to be developed can be made to yield a dozen effects or be destroyed by the most trifling awkwardness. Whether the effects shall be good or bad will depend not merely on manual dexterity of the worker but on his artistic sense and absolute knowledge of perspective, form, chiar-oscuro, etc. Given these, and a mastery of the technique of the process, and he will produce pictures against which the workers in other media can never compete. In it photography has reached its highest expression, but it is fatal to the dabbler who has not studied to be an artist. Mr. Underhill's mistake is in apparently believing that the camera man and the artist never reside in the same body. There are some, and there will be many, many more.

PLATES VERSUS FILMS

Henry Wenzel, Jr., has an article in the *Photographic Times* on the above subject, in which he submits that he has presented a fair case, and it is not to the advantage of films. It is to be regretted that this writer excludes cut films from consideration, on the ground that they do not admit of daylight changing (though they certainly can be used to advantage in a magazine) and are not generally stocked by the average dealer. Until recently I never thought of using anything but plates. Some technical work in which I was engaged drew my attention to cut films, and so satisfactory were the results that I have since tried them on all manner of subjects, portraiture, landscapes and micro-photography. So far I have not met with a single difficulty or failure. The results are identical with those obtained on a Seed 26 x plate, and the advantage of lightness, ability to print from either side and easy storage entirely outweigh the difference in cost. It may not be generally known that these films are very much thicker than the rolls, do not curl in development, require no glycerine bath and have a matt surface, which readily allows of the most extensive retouching without the use of a varnish. If their advantages were better known they would be more generally obtainable. As it is, any dealer will get them in a few days.

A NEW PHOTOGRAPHIC JOURNAL

We note the appearance of one more photographic monthly, *The Photo-Record*. The reading matter, if small in amount, is good, and the illustrations are excellent.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

CONDUCTED BY FAYETTE J. CLUTE

BE SELF-RESPECTING When you are asked to go out and make a negative for an acquaintance, do not let the assurance that you "will be paid for the trouble" serve as an inducement. Do not deceive yourself that here is a chance to recuperate the purse made thin by your bills for plates and paper. Either do it willingly and refuse pay, or have an understanding from the start that the prints will cost exactly so much. This price should be that of the better grade of professional work. It is an easy matter to explain that you do not feel at liberty to do work below the price of the professional with an establishment to keep up and a livelihood to make. If this negative is made for nothing, allow the party to order the prints of the professional and instruct him to charge his regular price. If you are asked to make portraits, unless fitted up for it, decline. Advise the customer that the better facilities of the professional permit him to turn out more satisfactory work. You may lose a chance to make a dollar here and there, but you will gain in the long run. Your patrons will find less fault with the work than if they "paid you for the trouble" only. You will have less of such work to do, but it will pay you better. The professional will be your friend instead of your foe. You will win the respect of your acquaintances, both for yourself and for your work; and, above all, you will preserve your own self-respect. Of course, with immediate friends the case is different. A little tact and judgment will enable one to draw the line. Give the plan a trial and see if I am not right.

THE CAMERA AND THE CHURCH One of my correspondents wrote me last fall, asking if I could advise him as to some process whereby he could make his camera of value at a bazaar that was to be given by the local church, of which his wife and himself were active members. He had read of flashlight portraits being made and finished in a few minutes, a corner of the room being curtained off for the purpose. While admitting that this could be done, I explained that the

quality of the results and the cost of their production would make that plan unadvisable. From suggestions I made, mainly due to a letter in some journal I had read, he evolved the following plan, which was not only remunerative, but highly creditable. That the idea may help others in a like situation, I give it publicity, regretting that its original source has been forgotten. Negatives were made of all the principal business houses, showing the proprietors and clerks in front. When the use to which they were to be put was explained, no difficulty was encountered in securing payment that covered the entire cost of the plates used in the original negatives and slides afterward made. Slides were also made from such negatives of local interest as could be borrowed or made for the purpose. The three or four church buildings in the town were photographed. The local professional furnished a few slides from his negatives of leading citizens, taking care to have his own name in the corner. Groups of children were particularly sought after and provoked the most applause when shown on the screen. To shorten the story, a lantern was hired, a small admission was charged and fifty-two dollars cleared. A repetition of the exhibition was demanded by the townspeople, but, the lantern not being again available on a convenient date, it was decided to await another season. I think the hint is a good one for a great many of my readers.

STAND DEVELOPMENT A correspondent in Iowa wants a formula for, and asks my opinion concerning, tank development. A good formula follows:

Carbonate of potash.....	1½ ounces
Sulphite of soda.....	¾ ounce
Glycin.....	¼ ounce
Water (hot).....	16 ounces

When ready for use add eight ounces of water to every ounce of this stock solution. My opinion is that tank development has advantages over the ordinary method when under-exposed plates are to be developed. If I were doing focal-plane shutter work almost exclusively, I would use the tank method. I do not think it gives as good a negative

from an over-exposed plate as can be obtained by the regular process. Another fault is its tendency to give greater density in that part of the negative placed downward in the bath. This can be taken advantage of by always putting the top of the plate, as it went into the camera, downward into the solution. One's foregrounds are seldom too dense as compared to the rest of the picture. Where the exposure is made for a perpendicular picture, this cannot be done, unless there is a tank for each dimension of the plate. In tank development beware of taking the plates out too soon. The negatives seem to fix out more than those developed in the usual way.

One of my readers has a
 PRINTING FROM negative, taken years ago,
 A FOGGED that, though badly fogged,
 NEGATIVE contains an image well defined. He wishes very

much to obtain a good print from it, and inquires as to the best method of going about it, incidentally asking my opinion as to the advisability of trying a reducer. My experience with reducers as a means of removing fog has not been entirely satisfactory. On a negative that has not become hard and horny from age and where the defect is merely surface fog, a weak reducer may often be applied to advantage, but the process is risky. I would advise my correspondent to try a plan described a few months ago in an English journal: Make a platinum print from the negative (in the case described this took one whole day's exposure). From this platinum print make a carbon transparency (this took two days in the case described), and from this carbon transparency a negative of any quality desired may be made, either by contact or in a camera. I see no reason why the plan would not work to perfection, and would advise a trial. Some of the developing papers should be just as suitable as the platinum paper, if the paper itself is of not too coarse a grain, and a slow plate could be made to take the place of the carbon tissue. Will my correspondent advise me of his results?

The other day I
 SAVE YOUR SPOILED wanted to make some
 BROMIDE PAPER blue-print paper. I
 wanted something

heavier and coarser in grain than anything that I had handy, and the idea occurred to me to reduce out the image on some waste bromide prints I had and then use that paper. The plan worked to perfection. A

rather strong solution of Farmer's reducer was employed. To tell the truth, I simply colored the ordinary one-in-four hypo solution a good, strong yellow with red prussiate of potash and immersed the spoiled prints. When clear they were given a good wash and then dried. Whether it was some coating the manufacturers put on the paper, or the gelatine that had held the silver bromide before the image was reduced, I cannot say, but I made some of the finest blue prints on this paper, after coating it with the iron solution, that I have ever made. I am not going to throw away any more spoiled sheets of bromide or developing paper after this. It is just as easy to carry them through fixing and washing as long as you have the rest of the batch to handle, and you can clear off the image when you get a bunch of them and have a most excellent paper for coating with the ordinary blue-print solution.

It is undeniable that there
 SHALL WE WET is much less danger of
 THE PLATE? markings, caused by un-

even flowing on of the developer, making their appearance when the plate is first soaked in water for a few minutes, but this slight advantage is greatly overbalanced by the evils for which the practice is responsible. The gelatine emulsion is the same as a sponge. If we had a sponge containing a certain substance that was to be acted upon by another chemical, and this action, to secure the best results, must take place in a certain length of time and be performed by the chemical applied in a certain state of dilution, we would not first fill this sponge with water. If we did, the solution applied would act only on the outer surface in anything approaching the right manner. The center of the sponge, filled with water as it is, would be acted upon only after a prolonged soaking in the solution, and, even after being reached by the solution, the dilution would be so great that its proper action would not take place. This center of our sponge is practically that side of the gelatine emulsion next to the glass. The solution that we wish to do its work in a certain state of dilution and to act upon every part of the sponge at as nearly the same time and in nearly the same way as possible, is our developer. I hope I have made it clear that wetting the plate in water before development is entirely wrong. If I have not done so, a comparative experiment or two ought to decide whether the practice is good or bad.

THE FADING OF INTENSIFIED NEGATIVES

There is little doubt but what negatives that have been intensified are more prone to fade after a number of years than those that have not been subjected to the mercury bath. I have several that have almost entirely lost all the fine detail they once possessed. On the other hand, negatives that were intensified at about the same time and varnished, as I wished to use them in carbon printing and feared bichromate stains, are as good today as they were the day the varnish was applied. Varnishing is a protection that should always be given to negatives that are thought valuable. As a precaution against splashes, careless handling with soiled fingers or stains from sensitized paper, it is well worth the small expenditure of time and money demanded. This is particularly true where one is in the habit of loaning valued negatives to friends.

Several queries have reached me concerning the amount of enlargement permissible that a small negative will stand. These questions, judging from the wording of the letters, evidently emanate from readers contemplating taking up hand-camera work, with a view to making enlargements from their most satisfactory exposures. I am sorry to say no rule can be laid down. Much depends upon whether the final print is of a subject treated in broad masses and intended to be viewed from a distance, or of one in which the observer would naturally seek for the finer detail at close range. Again, the negative may be more or less suited to enlargement. Negatives, for instance, of marine views that have been made with a small stop in order to overcome the strong lighting, often give enlargements to several diameters that are better, from a pictorial point of view, than prints by contact from the original negative. On the other hand, an interior, made with the largest permissible stop, would be found to stand but a slight amount of amplification. While the convenience and portability of the small camera is in its favor, there is not the same opportunity offered for the display of taste in the selection of the plane to be focused upon as with the larger instrument. Good work can be done with a hand camera. With it negatives can be secured from which enlargements may be produced that will be entirely satisfactory, even

more so, in some cases, than would direct prints from original negatives of an equal size. I think the better course is to use a camera not large enough to be a burden, and yet one taking a plate of such a size that composing the picture and selecting the focus can be more satisfactorily accomplished than in the smaller sizes. The Englishman's popular half-plate ($6\frac{1}{2} \times 4\frac{1}{4}$) is an ideal size, but our own 5×7 comes very near to filling the requirements I have just laid down.

A WARNING REGARDING FORMALIN

Formalin is an aqueous solution containing forty per cent of the gas formaldehyde. This gas rapidly escapes into the air, and it is therefore necessary that it should be kept in well-stoppered bottles. When dry it has little or no action, but, of course, that which escapes from the solution is in a moist state, and coming in contact with the human tissue of the nose, mouth and throat, which are moist also, it produces the same effect as the solution applied to gelatine, rendering them hard; in fact, kills them by preventing the performance of their normal functions. The effect on the nose, eyes and lungs is most injurious, and may be productive of serious and permanent injury. Its action upon the skin is also very marked; the finger ends become painful; the skin is killed and peels off; even the flesh may be attacked. Care should be taken not to inhale the vapor or allow it to reach the eyes, and the hands should be kept out of other than a very dilute solution as much as possible.

A correspondent who has been doing some brass work on a home-made enlarging camera wishes to know how it can be lacquered.

Before starting the parts should be well polished, perfectly clean, and free from grease. Use pale yellow or colorless lacquer and a camel-hair brush. You can get the lacquer at any paint store, and the brush should be flat and as broad as convenient for the size of the pieces. Hold the piece to be lacquered in the flame of an alcohol lamp or Bunsen burner until the steam just stops coming off. It should be just a trifle too hot for the hand to bear the touch. When this point is reached the lacquer should be applied as quickly and evenly as possible, using a quick, light stroke. Two or more coats may be applied. In treating lens tubes be careful to remove the lenses before applying heat, or a cracked or unmounted lens may be your reward.

THE PORTLAND CONVENTION

The Second Annual Convention of the Photographers' Association of the Pacific Northwest, which convened in Portland, Or., on October 3d, 4th and 5th, eclipsed the first convention both in point of attendance and value of demonstrations, exhibits and pictures.

The convention was called to order by First Vice-President H. D. Traver, President Jackson being unable to attend because of the illness and death of his son. The three days of the convention were brimful of good, plain, practical demonstrations, talks and discussions, and but little time was devoted to lengthy and useless discussions in the business meetings.

Among those who gave practical demonstrations were: Frank Doyle and Frank Fell of the General Aristo Company, Will Lussier of the G. Cramer Dry Plate Company, H. W. Oliver of the Seed Dry Plate Company and F. G. Bell.

A pleasant feature of the afternoon session on the second day of the convention was the presentation of a handsome watch and diamond fob to Secretary Butterworth, because of his untiring energies during the two years of the Association's life. Frank Doyle was very happy in the presentation speech.

The following officers were elected for the ensuing term: A. L. Jackson, president; A. Rodgers, first vice-president; C. F. Plummer, secretary-treasurer; E. L. Meyers, vice-president for Washington; Chas. Butterworth, vice-president for Oregon; E. Erickson, vice-president for Idaho.

After considering invitations from Salem and Tacoma, the convention decided to meet in the latter city in 1902.

Prizes were awarded as follows:

Foreign Class: First Prize—Moore & Stephenson, Atlanta, Ga.; gold medal. Second Prize: A. T. Proctor, Huntington, W. Va.; silver medal. Third Prize—F. M. Steadman, Puebla, Mex.; diploma.

Grand Portrait Class: First Prize—C. A. Krauch, Portland, Or.; gold medal. Second Prize—E. W. Moore, Portland, Or.; silver medal. Third Prize—G. Braas, Seattle, Wash.; diploma.

Genre Class: First Prize—Aurne & Nordstrom, Portland, Or.; diploma. Class A: No

entry. Class B: First Prize—J. L. Phelps, Spokane, Wash.; diploma. Class C: No entry. Class D (For Washington): First Prize—A. D. Rogers, Olympia, Wash.; diploma. Class D (For Oregon): First Prize—H. H. Mertens, Sheridan, Or.; diploma.

Landscape Class: First Prize—J. W. Tollman, Portland, Or.; diploma.

Miniature Class: First Prize—G. Braas, Seattle, Wash.; diploma.

BLUE PRINTS

If your blue prints do not wash out clear and clean in the whites add a few drops of gum arabic to each ounce of the solution. If the blue color is too green in tone increase the citrate of iron and ammonia; if too purple and yellow stains make their appearance, increase the ferrocyanide of potassium and slightly dilute the solution. Over-printed proofs may be reduced in a weak solution of ammonia. If this bath gives a purplish tone a short immersion, water containing a few drops of sulphuric acid, will restore the blue color. Try this blue-print process for some of your marine or cloud studies. Print your negative in the center of a large sheet of paper, by masking off the edges; then cover the printed portion and a narrow strip all around the edge with a card a quarter of an inch larger each way than the opening in the mat you have just used and print the margin of the paper. By shading it diagonally, so as to let one corner print stronger than the rest and keeping the shade in motion, you can produce the same effect as that shown in the popular Rembrandt mounts.

CHRISTMAS PRESENTS

The custom of presenting a year's subscription to a favorite magazine as a Christmas present has grown so general that CAMERA CRAFT has designed a dainty souvenir receipt to be forwarded the recipient of the present. No better gift can be thought of, for each month in the year some one is reminded of the thought and care of the giver. Should more than one magazine be desired the names can be entered on the same receipt. Make up the list and send it in so that the receipts can be prepared and sent you in time for delivery.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

LANTERN SLIDES FROM BOOK ILLUSTRATIONS

When attempting to make lantern slides from book illustrations, considerable difficulty is experienced in getting the image square on the plate, especially where the volumes are large and cumbersome. I find that the best way to do is to place a piece of glass, larger than the page, in front of the picture, one-half of the book lying flat on the table and the other half, that is to be photographed, against a vertical board. A wire may be used by passing it around the board and the glass to keep them in position. By this means there will be no distortion at all.

For line drawings the exposure should be slightly below the normal. This is more liable to insure clear lines than where the exposure has been too long. To develop, use a strong hydrochinon solution with one-quarter the amount of metol and a few drops of bromide. Develop fully ten minutes. This negative, after fixing and washing, must be intensified with mercury and ammonia, so as to insure perfectly dense whites and transparent lines. I find that a $3\frac{1}{2} \times 3\frac{1}{2}$ medium plate is best for making a contact slide from. To get a perfectly sharp image by contact, it is best to have the lamp flame on edge, because we then have a very narrow source of light and can thus get a much sharper image than if the side of the flame were turned to the negative. The same developer that has been used for the negative can be used for the slide, especially if it is intended for line drawings. This may also be intensified if deemed necessary.

I notice that many lecturers who subject their slides to electric light lanterns are much more liable to have their slides crack on account of the excessive heat that the light gives out, especially those slides that have very dense backgrounds, as they absorb heat much more readily than the transparent ones. One of the ways by which this annoyance can, to a great extent, be overcome, is by thoroughly drying the slide, mat and glass over a coal-oil flame just before applying the binding strip. This will avoid the sweating of the slide inside. But, further to insure them from cracking, make a slit along the

lower edge of the slide in the binding strip, two inches long. As the slide is inverted in the lantern, this slit will be on top, thus allowing the moist atmosphere and steam to escape. Not only will this insure the slide against cracking to a great extent, but it will also preserve it from mildewing and discoloring.

So far I have not mentioned one very important item in regard to the preservation of the finished slide, and that is that the slide should not be fixed in the plain hypo fixing bath, because it stays more or less porous, and this has a tendency, especially after having been subject to the heat of the lantern several times, to becoming mottled, or the film cracks into very fine lines. This may all be avoided by using the standard acid fixing bath according to Carbutt's formula, which I have found hardens the film so that varnishing is not necessary, unless the slide is to be used in countries where the atmosphere is decidedly humid and warm.

THE PROFESSIONAL AND THE KODAK

I noticed that during the late Presidential visit very few professionals got any photographs at all of the distinguished guests. Now, it seems to me that if they would lay aside prejudice, and have a kodak or hand camera always loaded, so as to take at a moment's notice such sights and scenes that do occur quite often, a nice little sum could be turned by making an enlargement up to 8×10 , and either selling copies directly to the public or the newspapers. Of course where they are made for the latter, one cannot let any grass grow under their feet. In fact, that is when even minutes count, for if a good print reaches them just in time to make a reproduction for the next issue, a very liberal sum is paid, besides getting your name in the papers.

There is a man in Los Angeles who made a chance snapshot, taken of the carriage containing the President and Mrs. McKinley during a parade. When he finally developed he discovered that he had a very fine one of the Presidential carriage. The sales from this one negative have amounted to between \$125 and \$150. Go, thou, and do likewise.

TRADE POINTERS FOR THE PROFESSIONAL PHOTOGRAPHER IN SMALLER CITIES

The average professional photographer in the country towns can add considerably to his income by making a series of two dozen or more negatives, about six by eight inches, of interesting features of the town, not only bare photographs of buildings, but also objects of interest in the immediate vicinity, such as picturesque lanes, orchards when in bloom, historical houses and other points of local interest. A few dozen such negatives will make quite an addition to his yearly income. But, aside from this, if four or five of these six-by-eight prints are mounted on a large cardboard and arranged with some idea of design, and the spaces interspersed with smaller views or bits cut out of larger ones, and this copied down to the six-by-eight size or smaller, many people—strangers and travelers—would take them in preference to the larger ones and pay more in proportion.

There is manufactured at present prepared paper the exact size of a postal card and the same thickness. These can be printed upon

and negatives made from the various prints to suit the size and shape of the postal. They can be made cheaply at odd times when there is nothing especial doing, as in the midsummer months. Several hundred of them may be printed for the fall and Christmas trade.

Another very neat way of using copies from the larger negatives is to print on some thin, mat surfaced paper, leaving fully an inch margin on three sides, and an inch and a half margin on one of the longer sides. They may then be stitched together with silk cord and some neatly embossed cardboard used as a cover. A series of a dozen or more of these may be sold in book form with very good profit, especially during the Christmas holidays. To make this little souvenir still more attractive, a synopsis of the town's history and, perhaps, its present officers, might be printed on the flyleaf. All these different styles may be distributed among the local bookstores and news stands, whose owners would be glad to handle them at a regular trade discount.



BY E. S. CURTIS

THE SCOUT

CURRENT AFFAIRS IN CHICAGO

CONDUCTED BY E. W. THOMAS OF THE CHICAGO SOCIETY OF AMATEUR PHOTOGRAPHERS

The Second Chicago Salon is now a thing of the past and every one is convinced that it was a much better one than the first. That it was closely studied was proven by the recurrent visits of the first-nighters. There were pictures they could not get away from but came again and again to view and discuss. The local papers reproduced a number of the pictures and wrote very flattering comments upon the exhibit as a whole.

The third salon is now being discussed and the salon is evidently to be a feature of each year.

The lecture course opened to an overflowing house, and the lecture by Dr. H. Darwin McIlrath was a departure from the beaten paths of lectures on China. The doctor penetrated the interior and entered parts of the country never before explored. The unique way the doctor and his wife traveled—on bicycles—across this forbidden land was interesting, exciting and a revelation to those who were unacquainted with the letters the doctor wrote while en route. The pictures illustrating the journey were as different from the regulation views usually exhibited as was the talk and description. They illustrated “the other side” of life in the Orient.

The membership list is now full—two hundred and fifty members are on the roll and a few names are on the waiting list. The list of members has nearly doubled within the last year and the society is in good standing financially. Enlarged clubrooms and enlarged darkrooms have been added to accommodate the increase, and while the duties and responsibilities have increased, yet the club is enabled to give the members greater advantages and more entertainment.

Preparations are well under way for the members' exhibit in the clubrooms of the society. The advance in the quality of work being sent in shows the influence of the salon's and of the individual exhibits that we had from different sources last season.

The lecture of November 7th, by Rev. S. M. Johnson, on the “Cathedrals of England,” was a unique exhibition of masterpieces of paintings from old-world galleries. These

pictures are by Mr. Frank Nixon, the celebrated miniaturist of London. Mr. Johnson's lecture is illustrated with these slides, which are in reality miniature paintings, the beautiful colors making them a most interesting and instructive set.

PAPER NEGATIVES

Mr. J. Brooke writing on this subject in the July *Amateur Photographer* (English) notes the fact that when carbon prints are made under unoled paper negatives in dull weather, the prints falsify the actinometer time and come out over-exposed. The writer believes this to be due to the well-known continuing action of light on sensitized carbon tissue so that in a given case of long exposure, say three hours, two forms of energy are at work; first, the direct action of the light, and second, the continuing action set up in the film during the early part of the exposure. This latter is not provided for by the actinometer, unless the actinometer time was gauged under like conditions, and is the cause of over-exposure. This continuing action is only possible in tissue containing some moisture, therefore if the tissue be thoroughly dried and covered with a rubber pad while printing, its disturbing influence will disappear.

A HANDY BRUSH

I have been using a Buckle's brush lately and if one wishes to apply mountant to the back of his prints without the fear of bristle tracks or ridges, not to mention an occasional bristle being left on the back of the print, I would advise him to try one of these conveniences. A Buckle's brush is simply a sponge, with one-half or three-quarters of its bulk stuffed into a short, wide-mouthed bottle. Any degree of stiffness or touch desired may be secured according as the sponge used is more or less harsh in its texture, and by letting it project from the bottle to a greater or less degree. When not in use it is stood on the flat end of the handle, where it does no harm, even if fully charged with paste. It has another advantage over the ordinary brush, in being quickly washed by removing the sponge and squeezing it out in clean water.



BUSINESS NOTES



Mr. E. J. McCullagh, of Stockton, Cal., in writing to the *Aristo Eagle*, says: "Demonstrator Doyle has already introduced me to collodio-carbon and I was using it to some extent; but the method of delivery advised by you, adds very materially to the appearance and sales of 'artists' proof.' Collodio-carbon gives by far the softest, richest effects of any paper I have ever used.

"I started using aristo products about 1893, and have used your various papers continually since. Am now using aristo platino, American platinum and collodio-carbon with eminent satisfaction to myself and patrons."

G. Gennert, New York, is quoting special prices on 1902 annuals.

"How to Develop Lovell Plates" is the title of a booklet recently issued by the Lovell Dry Plate Company of New Rochelle, N. Y. It is filled with practical hints and formulæ and will be sent free to all who ask for it.

If you wish to invest in an orange grove and fruit ranch write Carl E. Ackerman, care of CAMERA CRAFT, for full particulars.

The C. P. Goerz Optical Works are now ready to fit their new plate attachment to the No. 3 Eastman Folding Pocket Kodak, so that both plates and films can be used where heretofore films alone could be used. The advantages of using a plate attachment of this description are, that pictures can be focused on the ground glass, that all kinds of plates can be used, whereas there is only one kind of film made; also the saving of the cost of material, plates costing about one-half and being much easier to handle, the difference soon paying for the cost of the attachment.

Write for further information to the C. P. Goerz Optical Works, 52 East Union Square, New York City.

The Turner-Reich Convertible Anastigmat Lens has many good points to commend it to the attention of those who are interested in photographic objectives.

The Turner-Reich was the first anastigmat lens invented and controlled in this country. They are reasonable in price because there is no foreign royalties or import duty paid on them. With a working aperture of f-7.5 they

have an absolutely flat field and freedom from astigmatism. Even illumination of the image and remarkable depth of focus are valuable qualities which are supplemented by a large light circle in proportion to their focal length. All lenses in each combination are cemented so there are no air spaces or unnecessary reflecting surfaces in their construction. The former is a vital point for consideration, as a lens with air spaces between the combinations is liable to become unfit for use at any time it is subjected to a change of atmosphere.

The Turner-Reich lens is manufactured by the Gundlach Optical Company of Rochester,



BY FRANK SNYDER

KNITTING

N. Y., who have enjoyed an enviable reputation for the high quality of their lenses for many years.

Through a clerical error, the portrait of a Spanish lady, which was recently published in the advertisement of the Bausch & Lomb Optical Company in this journal, was credited to Torres & Co., Mexico City, Mexico. This portrait was in reality made by Arriaga & Co. of Mexico City. The picture was, however, made with plastigmat f-6.8, both these firms being supplied with these lenses.

The Capital City Camera Club, of Sacramento, Cal., has been successfully organized,

with the following list of officers: President, W. F. Jackson; vice-president, Miss Jennie Crofton; secretary, W. F. Glacken; treasurer, Mrs. E. R. Hamilton; board of governors, the president and secretary and I. C. Shaw, J. A. Woodson and Mrs. W. H. Govan.

The club has secured excellent quarters and is now arranging to equip them fully. The charter membership is sixty, which number will be largely increased.

The Eastman Kodak Company has been incorporated, with a capital of \$35,000,000, \$10,000,000 of which is to be preferred stock, six per cent cumulative, and \$25,000,000 common stock. English capital is said to be represented in the incorporation, although no English names appear in the list of incorporators, which is as follows:

George Eastman, E. O. Sage, Henry A. Strong, Sebert C. Fenn, George Ellwanger, Julius M. Wild, William C. Barry, Walter S. Hubbell and Henry C. Brewster, of Rochester, N. Y.; Charles S. Abbott, of Jamestown, N. Y.; William H. Corbin, of Jersey City, and M. B. Phillip, of New York City.

Although no publicity has been given to the plans of the corporation, it is thought

many of the important individual manufacturers in England and America will be absorbed.

"Woodland and Meadow," by W. I. Lincoln Adams, is a book that will interest every photographer and nature lover, dealing as it does with nature in all of its charms as found on a New Hampshire farm. The series of short sketches, bountifully illustrated with photographs by the author and other prominent workers, forms a coherent whole, delightful to the eye and soothing to the mind. The cover is in green, white and gold, with gilt edges. It retails at \$2.50. It will be sent, postpaid, on receipt of price by the Baker & Taylor Company, 33 E. 17th Street, New York.

The plant of the Miniature Portrait Company, western agents for the F. H. Noble Company of Chicago, was almost completely destroyed by fire on the night of November 1st. The origin of the fire is unknown. The loss amounts to about \$6500, partially covered by insurance.

The city of San Francisco has been photographed as no other city in the world has



BY WILLIAM J. MEYER

WINTER

been. One hundred and thirty members of the California Camera Club volunteered for service, and on October 19th and 20th they began work. These two days were cloudy, however, and the work was continued for some time later. As the prints were not requested until November 1st, CAMERA CRAFT reserves its comments upon the success of the work until the December number, when it will reproduce some of the leading pictures.

A fire in the rear of Arnold Genthe's studio on October 30th inflicted considerable damage. Fortunately, Dr. Genthe was in the neighborhood and personally directed the removal of most of his negatives, only a few of which were damaged. The loss is fully covered by insurance.

The well-known firm of "Rotograph," ever progressive, has now placed on the market their negative paper, as a substitute for dry plates and celluloid films. This "negative paper" shows almost no fiber structure and is so thin, yet so tough withal, that prints can be made from it without any waxing or oiling of the paper. In speed it equals a good dry plate, and has the further advantage of

lightness, cheapness (less than one-half the price of plates) and perfect non-halation qualities. Rotograph negative paper can be obtained in the usual plate sizes or by the yard. For enlarged negatives from which to make carbons or rough platinum it is unsurpassed.

"Rotograph" also announces a new brand of paper, the "Imperial Rotograph," a heavy cream-tinted paper, yielding rich and broad effects. Also their Iron Citrate Developer, as used exclusively by them, is now ready for the market.

The Print Committee of the California Camera Club has been hard at work lately, and the results are readily apparent upon an inspection of the boards. This month's exhibition is very creditable and shows great improvement upon former ones.

The committee in charge of the Second San Francisco Photographic Salon have their work well under way. Prints are beginning to arrive at the Institute, and, from the outlook, more pictures will be submitted than have ever before been sent to a photographic exposition in this country.

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For Sale—Half interest in leading studio in county seat of 10,000. Elegantly furnished; modern ribbed-glass slant light. Increasing business, now about \$400 a month. Best prices in the state. Purchaser to operate and retouch. \$1000. Address Hirsch & Kaiser, S. F.

For Sale—Good paying gallery in live town of 2000, twenty-five miles from city. Fully equipped. Address C. C., care of CAMERA CRAFT.

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For Sale—\$75 cash. One matched pair Goerz III. lenses, No. 2; $4\frac{1}{2}$ x $6\frac{1}{2}$; 7-inch focus; cost \$105; matched; never used. H. Lyons, Elkhart, Ind.

At—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

For Sale—Photo gallery in city of 4000 inhabitants, paying \$100 per month; \$600 cash. This is a bargain to bear inspection. Address L. B., CAMERA CRAFT.

Young lady, good printer and toner, also develops and copies, wishes position. State hours and pay. M. B., P. O. box 802, Fresno, Cal. References.



CAMERA CRAFT

DECEMBER
CHRISTMAS NUMBER

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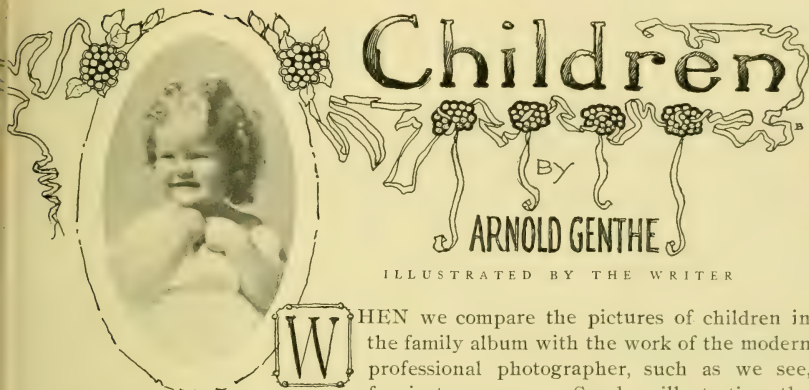
CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IV.

SAN FRANCISCO, CALIFORNIA, DECEMBER, 1901

No. 2



WHEN we compare the pictures of children in the family album with the work of the modern professional photographer, such as we see, for instance, every Sunday illustrating the Prize Baby contest, we find that the difference is really not as great as one might expect. Technically, of course, the modern photographs are far better than those of twenty years ago, but, artistically, not much headway seems to have been gained. Photographic tradition has not yet abolished the stereotyped look of strained expectancy nor the "grown-up" poses and expressions, that remind one more of the juvenile opera company than of the natural grace and free abandon of unspoiled childhood.

Children are such sensitive and elusive subjects for the camera that the matter-of-fact methods of the ordinary professional worker will never produce good results. And so it was that, up to a very few years ago, the amateur succeeded much better than his professional rival in making studies of child-life which had truly pictorial value. The amateur, naturally, has the great advantage over the man in the studio, that he deals only with children he is acquainted with and who know him. He has ample time to wait for a good opportunity, which will present itself much easier in the natural surroundings of the child than under the photographer's skylight. We all know how very sensitive children are to the influence of environment, and the strange things which, as a rule, fill the photographer's studio, are liable to awake in the little ones a feeling of distrust and timidity, or, perhaps, of inordinate curiosity, none of which is conducive to the obtaining of desirable results; while at home, at play in the nursery or in the garden, the child feels absolutely natural and at ease. The parents (and the nurse), who surely have a better knowledge of the characteristics of the youngster than the keenest outsider can ever acquire by an hour's observation in the studio, ought to be the best photographers of child-life. And, indeed, some of the most successful children's pictures have been

made by those of them who had a sufficient knowledge of the handling of a hand camera. That to know a little of photographic technics and possibilities is a condition "*sine qua non*" if satisfactory results are to be obtained with the small hand box, most people do not seem to realize. Many excellent opportunities for the making of a real picture have been wasted through the ignorance of the person who "pressed the button." Often mothers come to me with some exceedingly poor films—snapshots taken in bad light, time exposures made with camera

ing me if something with the negatives, only pictures they It is to be hoped of the rudiments of become a little more immense importance will be better recognized (as well as able to make good under all sorts of



PLEASED

This knowledge is possessed by the of course, and though a better light and around, he is badly he has to photograph place that is strange well to take away that emphasizes its ordinary living room, easier for the child But above all, the camera" must possess a genuine love for children, a real knowledge of human nature and a great deal of tact and patience. He must feel, instinctively, with which child he may try to make friends, or which one had better be left absolutely alone. Some want to be amused and entertained, while others are so dignified and reserved that they will resent any familiarity attempted by the stranger. And the tactless photographer, who is in the habit of treating children like little monkeys and condescendingly pats them and calls them his dear little "tootsy-wootsies," will get himself into trouble. I know of a three-year-old boy who was highly insulted because the photographer, without any preliminaries, got out a jumping-jack and told the boy to look at it.

"It made me so mad," the little fellow said. "Why shouldn't I look at mamma or at the man?"

A true spirit of comradeship is most needful to the photographer in perpetuating, with his camera, the fugitive charm of childhood, and with that alone can he find the right means of interesting the child, so that pictures full of animation and freshness will reward his efforts. Each child has, of course, to be treated according to its individuality, which, even in very small babies, is

held in hand—ask—could not be done as they were the had of their child. that the knowledge photographic art will common, when the of the hand camera nized, and then the the nurse) will be pictures of children conditions.

of the technical side professional worker, he has in his studio greater facilities all handicapped because strange children in a to them. He will do from his studio all unlikeness to an so that it will be to feel at home there.

"man behind the

infinitely more pronounced than the superficial observer would think possible. Fixed rules or formulæ cannot be given. I have amused myself looking through quite a number of articles in our photographic magazines that deal with the question of how to interest the child in the studio, and I was astonished to find rather absurd things said there by men who are well known as successful photographers. Mr. X., after long experience with children under the skylight, advises the use of the "singing voice as an excellent way of getting the interest of children." By this he means the photographer to sing the necessary instructions instead of speaking them, and he assures us that children enjoy this method very much. Mr. Y. says:

"The studio should be filled with toys. If one kind of toy does not appeal to the child, bring out another and still another, until he becomes interested, if not in the quality, at least in the quantity of toys you produce."

Mr. Z. wants the child to blow soap-bubbles, and "you will see a hundred of the cutest expressions imaginable, nearly every one of which would make a picture."

To make friends with very young babies is, perhaps, a rather risky and



KITTY

fruitless undertaking. They belong in the arms of the mother, where the tender responsiveness that exists between mother and child will create better possibilities for the photographer than his best tricks ever could. How much more enjoyable and natural such a picture is than those standard poses, where the baby is propped up in a chair and prevented from falling by invisible hands; or that other pose some mothers are so fond of—the baby, minus clothes, stretched out on a hair rug, that, on other occasions, has to represent grass. Such a photograph may have some value as a physiological record, but it will never be a picture. To attract the attention of the little one, the most simple and effective means is, perhaps, the time-honored game of



STORIES

peek-a-boo, which the photographer can easily play behind the camera for the amusement of the baby. If he considers such a thing below his dignity, he has no business to photograph children. He must, as I said before, get down to the level of the child if he wants to obtain a childlike picture.

Except with babies who cannot yet talk and walk, to have anybody besides the mother in the studio is generally disastrous. Yet how often will the entire family, enforced by some well-meaning friends, insist upon "helping" the photographer. Let me take a mild case:

The mother, the aunt and the nurse. The child, dressed in a freshly starched and ironed dress of immaculate whiteness, the hair neatly and

vigorously brushed, is told to be real good and do everything the man says.

Mother — Now, darling, smile for mamma.

Child grins.

Aunt — No, smile nicely.

The darling's idea of smiling nicely consists in putting out its tongue.

The nurse runs up, kisses the child and pulls up the dress, so that the knees will show.

Nurse — Now, look at nannie, sweetheart. Goo-goo-goo. Hi-hi!

Aunt — There; that's a good boy. Oh, why did you not take it then? He had such a cunning expression.

Mother — Don't stick your finger in your mouth.

Nurse — Bow-wow, bow-wow. Mew-mew-mew.



A MINIATURE

Child looks happy.

Aunt — No; wait a moment; don't take it now. Darling, put your little hand against your face. Don't you know, he looks like one of those old paintings when he does that.

Mother — Don't hold your head like that. If you are good you will get some nice, pink ice cream afterwards.

Child grows restless and demands the ice cream immediately.

Aunt — I don't know what is the matter with him today. He is never like that at home.

And so on *ad infinitum* until the child is howling and the patience of mother, aunt and nurse has completely given out. The baby, however, quickly recovers from his crying fit, and the photographer, without the least display of ill-humor and armed with a further supply of plates and patience, proceeds



IN ALL SERIOUSNESS

to make friends with his little victim and obtains some satisfactory results without the efforts of the exhausted family.

Try to make the child forget that it is being photographed. Don't tell him that he has to be good, because he is going to have his picture taken. A child is just as liable to get that "conscious" expression in front of the camera as grown-up people. They will try to look pretty and smile amiably, and will even ask, "Please take me in this pose." It is absolutely necessary to make the picture, before they realize what is going on. Good light, rapid lenses and plates, and quick perception will do the work satisfactorily.

One photographer, who has become quite famous through his studies of children, has adopted the method of playing with them or interesting them in some way or other, and, when the good moment has arrived, he signals his assistant to make the instantaneous exposure. But that is rather taking his chances, for how is a man to judge what the picture is going to be like, if he cannot see it from exactly the point from where the camera sees it? How can the composition of lines, of lights and shades, be controlled in that manner? And that is absolutely necessary, if we want to get pictorially valuable results. Sometimes it is a good scheme to pretend to have given up the idea of taking the picture. The photograph of the two girls shown on a preceding page was made that way. These two little ladies insisted upon posing and looking pleasant, until I told them I would not photograph them that day, because the light was bad. Then they forgot all about the camera and commenced to tell each other funny stories.

Occasionally, extraordinary means



QUIET

have to be resorted to. I remember a very picturesque, but very spoiled child of three years, who objected forcibly to everything his mother said, and the sitting ended hopelessly in tears. I asked the mother to send the boy alone the next day, with the nurse. When he came, I pretended to be quite cross and spoke to him in a very severe tone. Such a thing had evidently never happened to him before, but it made him a most willing and manage-



THE MOTHER'S STORY

able subject, to the visible astonishment of his nurse. The mother liked the pictures very much, but I doubt if she would have approved of the method by which they were obtained.

Toys will sometimes be of great help in the studio. Let the little girl bring her doll or the boy his woolly dog, if they are really fond of them, though an otherwise good composition can easily be spoiled by having the toy in a bad or in a too prominent place. Live pets—a kitten or a little dog—lend themselves much better to pictorial treatment, even if they try the patience of the photographer to a higher degree. The imaginary bird or cat that is supposed to come out of the camera, had better be abolished forever, as they are responsible for stary or frightened expressions.

If special preparations that would make the child feel uncomfortable, are avoided, if the child is dressed in an every-day dress (simple garments of a soft

material, falling in easy, graceful lines, are preferable), and if the photographer is a quick and tactful worker who knows how to make use of a good opportunity pictorially, the photographing of children in the studio will be a pleasure to the family as well as to the "man behind the camera."



— a maid demure and pleased.

GLOSSY SURFACED PRINTS

Prints by any process may be given a high and permanent gloss (which will not be damaged by mounting) by first immersing them in a saturated solution of borax in which bleached shellac has been dissolved by heat, and afterward squeezing them upon glass previously lightly anointed with vaseline. — *Photography.*



With the Hopi

By

George Wharton James.

ILLUSTRATED BY THE WRITER

Interesting among Indians because of their picturesquely constructed houses on the summits of high mesas, reached only by precipitous trails, the Hopi of northern Arizona have always possessed extra and peculiar fascination on account of their strange and thrilling religious rite, known as the snake dance. This I may describe in a future number of *CAMERA CRAFT*, but here I wish to call attention to a few interesting facts not so generally known about this semi-civilized family of native sons and daughters of the Painted Desert. For the region they live in, named by the Spanish conquistadores, three hundred and fifty years ago, the Province of Tusayan, is a region of color. The rocks of which the mesas are built, the sands of the desert, the peculiarly carved buttes which abound on every hand, are all strikingly colored, with such a variety of hues and tints that one does not wonder at the name—the Painted Desert—which is also applied to the country through which we must travel to reach the home of the Hopi.

Leaving Canyon Diablo, on the transcontinental line of the Santa Fe, eighty miles' drive over this sandy, tawny desert brings one to the cornfields of the Hopi, as properly they should be called. For years they have been known as the Moki, a term of reproach applied to them in derision by the Navajoes, on account of their unsanitary habits. These cornfields are a wonderful monument to the perception, industry and thrift of the Hopi. White men would have starved to death in the place before they would dream of planting corn in such an inhospitable-looking soil. No springs or streams sufficient to irrigate with, unversed in digging wells and pumping water to the surface, one would have thought an ignorant Indian would have looked elsewhere before planting his corn in such a place. But he who deems an Indian "ignorant" in matters which naturally come under his observation is apt to be much deceived. The life of the Indian, from the cradle to the grave, is one of close observation. His very existence depends upon its exercise. He soon discovered, therefore, that there was a natural subsoil irrigation in certain parts of this desert where his corn would grow. And grow it does, most wonderfully. Sometimes water is scarce; then the crop decreases, but generally a good crop may be relied upon. To hoe his cornfield a Hopi will often run over the desert forty, fifty, sixty, and even eighty miles in a day. And this statement can be authenticated by unimpeachable authority. Sometimes, when the field is near by, the Hopi will ride on his burro. Two of these cunning creatures are shown in the heading. They are almost a necessity of Indian life. The streets would seem lonely without them, and they afford a great deal of pleasure to the children, who make them the chief contributors to some pretty lively fun. It will be noticed that the animal to the left has lost part of his left ear. This is a proof that he is possessed of kleptomantic proclivities. It is the custom, if a burro is found



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STREET IN SHUNGOPAVI

stealing corn, to call him into a family conclave, and then, if he is deemed guilty, he is sentenced to have part of his ear cut off to remind him of his wrongdoing and prevent future moral lapses.

On one of these burros we ride up the steep trail that brings us to the westernmost village of the Hopi, Oraibi. It is perched high on the mesa top, several hundred feet above the valley, and the various trails are steep and rugged. Some of them are sheer climbs, up which no animal other than man can go. There are six other villages, three of them ten miles, and the other three about twenty miles, to the east of Oraibi. They, also, are perched upon high mesas which thrust themselves, like long noses or fingers, into the sandy desert. On the middle mesa are Shungopavi, Mashonganavi and Shipauluvi, while on the eastern mesa are Walpi, Sichomavi and Hano. While there are distinguishing features in the architecture of each village, the first picture gives a clear, general idea as to the prevailing style. All the houses are built of rude pieces of sandstone, cemented with mud. Steps are made of larger slabs of stone, and often the only means of access is by long ladders, the long poles of which tower high above the buildings and give a singularly picturesque aspect to the villages, whether seen near or afar. In the olden days there were neither doors nor windows in the first story of the houses. They were built purposely so, as they must serve as fortresses as well as homes. When threatened with attack by foes, the ladders were drawn up to the platform above, from which defense was comparatively easy. The advent of the white man with his death-dealing gun and rifle has shown the futility of such means of defense, and he has also interfered with the long-established feuds of the centuries and practically prohibited any other quarreling except that which

he approves. So that now doors and windows are becoming more common as the years go by.

The visitor who enters a Hopi pueblo for the first time is struck by the peculiar method of hairdressing used by the young maidens. The picture below shows a group of these girls at Shungopavi, and the "whorl" over each ear is plainly to be seen. This style or fashion is one of long standing, for Castenada, the historian of the Coronado expedition, describes it as existing in the days of the Spanish conquest. In it is seen the poetic symbolism of a simple-hearted people.



BY GEORGE WHARTON JAMES

HOPI MAIDENS

The Hopi emblem of maidenhood and purity is the squash blossom; of maturity and fruitfulness, the long squash itself. Hence, the whorls of the maiden are in imitation of the squash blossom, and are a constant reminder of her duty and privilege to be maidenly and pure; and, when she marries, she must change the style of her hairdressing to long, pendant rolls, in imitation of the fruit of the squash, which suggests to her the joys of maternity oftentimes repeated.

This roll may be seen in the fashion of hairdressing shown in the picture of an Oraibi woman engaged in the interesting occupation of making piki. Piki is a wafer bread peculiar to the Hopis. It is finer than the finest tortilla of the Mexican or oatcake of the Scotch. No biscuit maker in America or England can make a cracker one-half so thin. Wafer bread is thick compared with it, and yet these rude savages (?) make it with a dexterity that is as marvelous as it is hard to imitate. Cornmeal batter, in a crude earthenware bowl, is the material; a smooth, flat stone, under which a quick fire is kept burning, is the instrument, and the woman's quick fingers, spreading a thin layer of the batter over the stone, perform the operation. It looks so easy. Try it, young lady who would scorn to be regarded as inferior in anything to an Indian. I will have vaseline or other emolient ready for your blistered fingers when you have shown how quickly you can learn—how not to do it. A lady of one of my parties tried it once and failed. My cook, a stalwart Kansas City man, knew he would not fail. And he didn't. He had four of the best-blistered fingers I had seen in a long time, and he has no interest now in the manufacture of piki. But the Hopi woman just greases the stone, dips her fingers into the batter, carries them lightly and carelessly over the heated surfaces, and, in a moment, strips the already baked sheet from the stone. When several are baked, she folds them over and over until they are about the size of an elongated shredded wheat biscuit.



BY GEORGE WHARTON JAMES

MAKING PIKI



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HOUSE BUILDING

It is readily apparent that this kind of work is essentially within the province of woman, but it is a reversal of our conception of things to see the "gentler sex" engaged in the building of a house, as is shown in the picture above. Here a most picturesque group can be discerned, but engaged in this strangely chosen and unwomanly labor. Yet, to the Hopi woman (and man, too) there is nothing strange in this scene, for the woman, and not the man, is the owner, as well as the director of the house. Hence, the Hopi reasons, why should she not build it? It is hers, so let her make it, and so she does. She uses no spirit level, no plumb line, no square, no saw, and yet she makes a creditable house, fairly square and plumb, warm and cosy in winter and cool and comfortable in summer. The mud of the winter's watercourses is used as mortar, and the pieces of disintegrated sandstone that abound on the mesa tops form the building material.

This is woman's rights with a vengeance, for not only does she actually lay the stones in place, but one picture shows us that she is her own hodcarrier, this woman being stopped in the doorway, or, rather, caught there with the camera, as she was about to ascend the ladder to supply her tinful of rocks to the "bricklayers" above. I wonder if the builders of the Tower of Babel were women? It would help account for the confusion of tongues that ensued, especially if they chattered and gabbled as much as these Hopi women do during the progress of their work. When we leveled the cameras on them there was a universal strike. This was not a conflict, in the ordinary sense of the term, between capital and labor, though



A HOD CARRIER
by GEORGE WHARTON JAMES



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HOPI WEAVING

capital (represented by the impecunious photographers) eventually had to capitulate and pledge itself to provide a new dress for each and every woman engaged on the building. As soon as this agreement was duly sworn to—in Hopi, by the writer—the strike was declared off and work was resumed, though one of the blithe females demanded *two* dresses for the double shots that were taken at her. I have been short on dresses ever since, but I am of opinion that some of the dresses I sent up to my building friends will not be found inconveniently long.

In direct antithesis to these pictures, and yet purely in accordance with Hopi logic, is the last picture, which shows a man weaving a woman's garment. Men, also, knit the stockings and engage in other so-called feminine occupations. There is nothing incongruous in these things to them. They are part of "the way of the old" handed down to them by their forefathers, and they are essentially conservative and opposed to change. Indeed, this is the key to their whole character, as I have shown elsewhere.

To watch a weaver at work is to learn a new respect for Indians. As one sees the rude loom—a few poles and sticks—and the home cleaned, spun and dyed yarn, no shuttle, no complicated sheds and battens, nothing but the crude, home-made appliances, and then watches the yarn climb up, thread by thread, battened down by hand so that the garment will hold water, and finally receives it, a finished product, strong, shapely, artistically designed and perfectly fitted for its required purpose, he comes to the conclusion that the Hopi weaver, at least, has a right to be classed among the skilled artisans of the world.

These are but few of the interesting things that the photographer, amateur or

professional, can find to engage his attention among the Hopi. No field is so full of delightful surprises and makes so many demands upon one's resources. The Indian is rapidly being changed, if not passing away, and if he is to be shown in his primitive simplicity, the work must be done within the next few years or it will never be done at all.

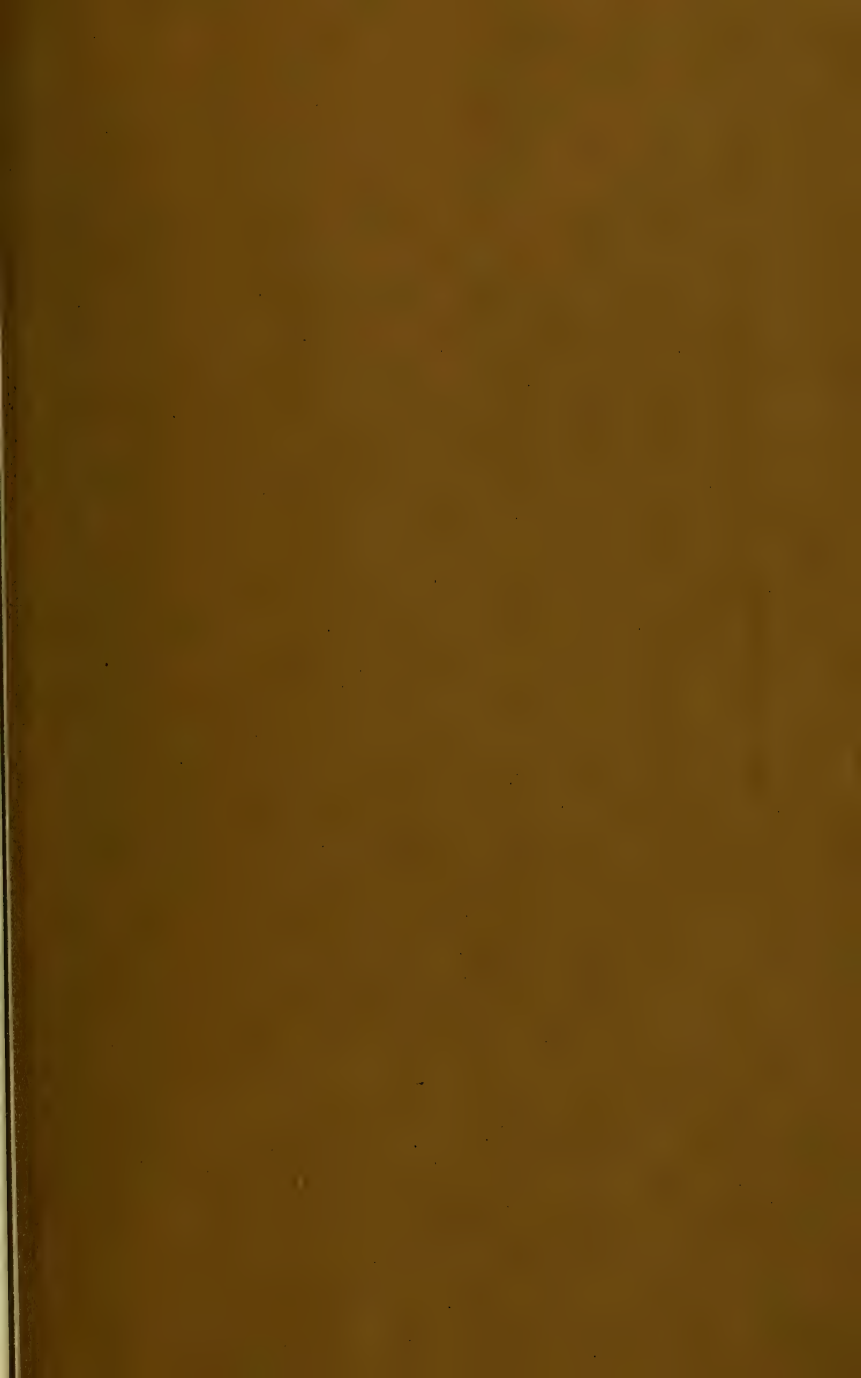


BY FRANK SNYDER

THISTLELAND

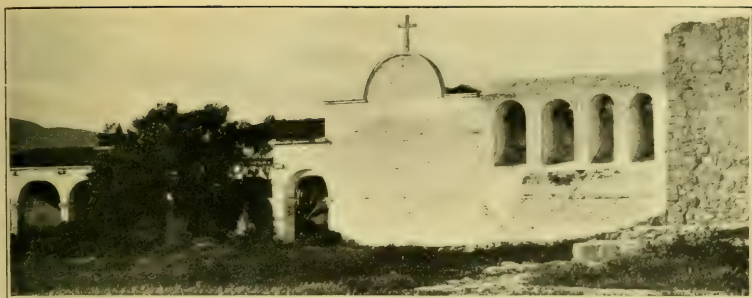
DRYING NEGATIVES

For some time past I have dried all my negatives by wiping them gently with a Turkish towel, and find the procedure perfectly safe and an advantage rather than otherwise. I grasp a mass of the towel in the hand, making it into a sort of pad, and draw it lightly several times across the face of the negative, until the superficial moisture has all been removed. This has the effect of removing chance particles of grit, hairs, etc., that often adhere to the negative. It insures even drying, while with such treatment the negative is usually ready for printing in an hour's time.— *Percy Lund in British Journal of Photography.*





SAN LUIS REY
by H. C. TIBBITTS



BY H. P. LOVICK

SAN JUAN CAPISTRANO

THE CALIFORNIA MISSIONS AND THEIR PRESERVATION

BY CHARLES S. AIKEN

Sense and sentiment enter into the plea for the preservation or restoration, so far as possible, of the old missions of California. They mark the making of history in the eighteenth century; their ruins dot the California landscape from Loreto to Sonoma; they teach, in their mute ruins, of civilization's march — therefore, practical good Sense says, save them. In western America the storied walls are few; all is new except Nature's own creations; all that tell of man, of his loves and his strivings, are the homes of the cliff dwellers and the missions; all that tell of art and architecture and suggest the poetry of life are these adobe ruins of the Franciscans — therefore, Sentiment says, save the missions.

The story of the missions has been told and retold. In these days of the waning power of Spain the story has a certain pathos. To the reaching out for added power and territory by Charles III of Spain is due the building of these picturesque structures at intervals along more than six hundred miles of California coast. Alta California, it was then. Already the arid peninsula of Baja California had been seized by Spain, and the Jesuits, with their determined ardor, had established fifteen outpost missions for the Indians. But the swinging ball of progress and the ambition of kings demanded the expulsion of the Jesuits, the occupation of their holdings by the Franciscans, the pushing onward and upward into the almost unknown northwest for the conquest and the glory of Spanish arms.

To the Viceroy of Mexico, the Marques de Croix, was this task of conquest delegated by the King of Spain. In turn the work of progress, that has meant so much for history's turning pages, was passed by the Viceroy to Jose de Galvez, who was named as *visitador-general*. But the actual advances in religious domination and the posting in the wilderness of the many missions are chiefly due to that extraordinary Franciscan missionary, Father Junipero Serra. He had already attracted attention by his mission work in the Sierra Gorda of Mexico, and results showed his special fitness for the pioneer opening of Alta California.

The records tell that Serra and his little band arrived from San Blas at Loreto, in Lower California, on April 1, 1768, and then proceeded to occupy other



THE CROSS OF SAN LUIS REY
by H. P. LOVICK

missions of the peninsula. Two months later came Galvez, with a large military force, and, after a conference with Father Serra, it was agreed to move northward to San Diego and to Monterey by sea and by land, and to be followed by the newly appointed Governor of Alta California, Gaspar de Portola.

And that was the way the twenty-one California missions came to be. The expeditions pushed forward, in spite of peril afloat and ashore. Everything was due to the indomitable will of Father Serra. It is related that he was delayed in starting by land by reason of an injury to one of his legs. The limb became so swollen that he could scarcely keep his seat upon his mule. When Father Palou, at San Xavier, urged Father Serra to rest behind, for a time, at least, the latter is said to have replied:

"Let us speak no more upon the subject. I have placed my faith in God, and trust in his goodness to plant the standard of the holy cross, not only in San Diego, but even as far as Monterey."

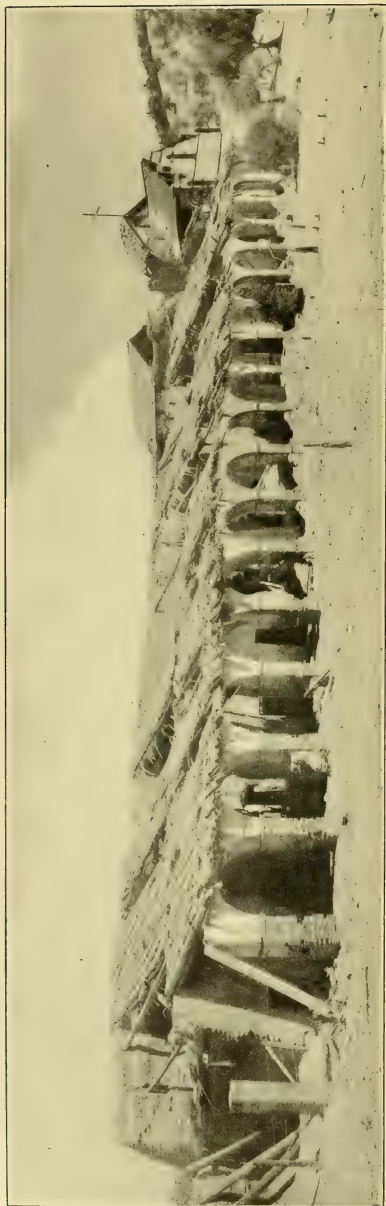
On the way northward, but south of the present boundary line between Mexico and California, Father Serra founded, May 14, 1769, his first California mission, consecrating it San Fernando de Vellicata, after the sainted King of Castile and Leon. After this the other missions were established, beginning at San Diego, July 16, 1769; Monterey, June 3, 1770 (afterward, in 1771, removed a short distance and becoming the Mission San Carlos del Rio Carmelo); San Antonio de Padua, July 14, 1771; San Gabriel Arcangel, September 8, 1771; San Luis Obispo de Tolosa, September 1, 1772; San Juan Capistrano, November 1, 1776; Nuestra Senora de los Dolores, San Francisco, June 29, 1776; Santa Clara, January 12, 1777; Nuestra Senora de Los Angeles de Porciuncula, September 1, 1781; San Buenaventura, March 31, 1782; Santa Barbara, April 21, 1782; La Purisima Concepcion, December 8, 1787; Santa Cruz, September 25, 1791; De Maria Santisima de la Soledad, October 9, 1791; Del Gloriosisimo Patriarca Senor San Jose, June 11, 1797; San Juan Bautista, June 24, 1797; San Miguel, July 25, 1797; San Fernando Rey de Espana, September 8, 1797; San Luis Rey de Francia, June 13, 1798; Santa Ynez, September 17, 1804; San Rafael, December 18, 1817; San Francisco Solano (or Sonoma), August 25, 1823.

To preserve and restore these tottering piles of adobe and tiling much has



BY H. P. LOVICK

PALO MISSION CHAPEL



been done, but much more remains to be accomplished. The California Historical Society and the Landmarks Club of Los Angeles are leaders in this work. But they should have help—liberal and prompt. Who will join with CAMERA CRAFT in giving aid to a project that should appeal to all artists of pen, pencil, brush or camera?

The condition of things at San Antonio is true of many others. Of this a writer in *Sunset Magazine* says recently:

In its palmy days San Antonio must have been a wonderfully beautiful place; now it is a picturesque ruin when seen at a little distance, and a ghastly wreck of the vandal when more closely inspected.

A little attention, trifling and not costly repairs, a few years ago, would have saved the building and kept it intact for a generation to come. For some reason nothing was done. The leak in the roof grew larger, a hard winter came on, the side walls washed away a bit, a supporting beam sank, the roof fell, and the church, now filled with a mass of debris, was left open to the ravages of wind and rain and ruthless man.

The place has been completely looted. Even the locks have been broken or sawed out of the doors. Not a scrap of anything that could be carried away has been left.

Is the ruin to go on? Is this building, one of the few historic structures in our young State, to become a mere heap of dirt, barely distinguishable from the natural hillocks of the valley?

In "The Angelus," Bret Harte paints well the picture of the passing glories of the Mission Dolores of San Francisco at that time, 1868. The rare sentiment the poem reflects is a fitting plea for the holding fast to these links of far-western history, showing how the interest in their preservation has been kept alive through successive years by the writings of men who have had but a passing view of their romance and beauty.

SAN ANTONIO DE PADUA

BY H. P. LOWE

The famous writer, viewing with sorrow the passing of San Francisco's most famous landmark, composed the poem which in part was responsible for its present good state of repair.

Here are some of the verses, familiar to some, forgotten by many:

Bells of the Past, whose long-forgotten music
 Still fills the wild expanse,
 Tingeing the sober twilight of the Present
 With color of romance!

I hear your call, and see the sun descending
 On rock and wave and sand,
 As down the coast the mission voices, blending,
 Girdle the heathen land.

Within the circle of your incantation
 No blight nor mildew falls;
 Nor fierce unrest, nor lust, nor low ambition
 Passes those airy walls.

* * * * *

O solemn bells! whose consecrated masses
 Recall the faith of old,—
 O tinkling bells! that lulled with twilight music
 The spiritual fold!

Your voices break and falter in the darkness,—
 Break, falter, and are still;
 And veiled and mystic, like the Host descending,
 The sun sinks from the hill!

PRINTING AND MANIPULATION OF VELOX PAPER

BY EDWARD W. NEWCOMB
 IN THREE PAPERS—THIRD PAPER

Should the amateur desire to change from the ordinary black and white tone of velox prints to a color suitable for a particular picture, the following formulæ will enable any one to obtain green, blue, sepia, red, brown and warm black, and even double tones that give practically the same flesh tints as the Kieley-Steiglitz mercury treatment does platinotype. Thus, all that one could desire is embodied in the one paper. We have rough, smooth, fast and slow paper, and, by a mere change of developer or after bath and the use of a few common chemicals, almost any color can be readily obtained:

For red, orange or brown—Over expose ten to twenty times, and to the regular developer with bromide of potash add the following restraining solution:

Bromide of ammonia.....	½ ounce
Carbonate of ammonia.....	½ ounce
Water.....	10 ounces

Dilute the standard M-Q developer with its bulk of water and add three drams of above restraining solution to each ounce of developer used; then develop patiently as the finer reds are produced, providing the exposure has been

long, by prolonged development, perhaps as much as twenty minutes being necessary. Those who fail to obtain excellent results should try a much longer exposure than they first gave. The intermediate colors are yellow, orange and brown, the red, a fine Bartolozzi, coming last of all. When secured, rinse, fix and work as usual.

Another red is obtained by immersing a print that has been developed and fixed as usual in the following:

- | | |
|---|----------|
| (1) Water..... | 20 c. c. |
| Ten-per-cent solution of copper sulphate..... | 1 c. c. |

And enough ten-per-cent solution of ammonium carbonate to dissolve the precipitate formed and produce a deep, clear blue.

- | | |
|--|-----------|
| (2) Ten-per-cent solution of potassium ferricyanide..... | 25 c. c. |
| Water..... | 150 c. c. |

Add 2 to 1. In this muddy liquid the black and white velox will become a rich red. If the solution be diluted, a purple may be obtained in it.

Brown, reddish brown and red — Mix the following bath and use at once. It does not keep:

Water.....	8 ounces
Potassium ferricyanide, ten-per-cent solution.....	24 minims
Glacial acetic acid.....	1 ounce
Uranium nitrate, ten-per-cent solution.....	24 minims

If the whites become discolored, soak prints in a tray of clear but not running water, and, if a few changes of water should not clear the whites in twenty minutes, immerse in a one-per-cent solution of sulphocyanide of ammonia until the whites bleach, which they should do rapidly.

Green — After turning prints red in the last bath given, immerse them in the following solution and then wash sparingly:

Water.....	3 ounces
Perchloride of iron, ten-per-cent solution.....	30 minims

Another green is had by adding two drams of a ten-per-cent solution of uranium nitrate to the bath given for blue. The green will wash off in running water, hence the prints should be merely rinsed in a tray of water.

Blue tones are secured in the following bath:

Ten-per-cent solution of citrate of iron and ammonia.....	2 drams
Ten-per-cent solution of potassium ferricyanide.....	2 drams
Ten-per-cent solution of nitric acid.....	4 drams
Water.....	4 ounces

Immerse the print until a rich blue is obtained, then wash well. The bath keeps. If to this bath is added its bulk of water, a blue-black is to be had, with grayish half-tones.

Warm black — Para-amidophenol developer produces about the finest tones of this sort to be had. Use the formula with carbonate of potash given in the directions with the developer, or bleach in

Bichloride of mercury.....	12 grains
Muriatic acid c. p.....	2 drams
Water.....	6 ounces



STILL LIFE
by R. A. LEET

until the image is gone, then wash well and immerse the print in combined toning and fixing bath diluted to ten times its bulk. Then wash well.

Sepia tones are to be had with old para-amidophenol developer that has been used considerably, or in

Hypo-soda.....	5 ounces
Powdered alum.....	1 ounce
Boiling water.....	25 ounces

First dissolve the hypo, then add the alum. This gives a turbid solution, which is to be used unfiltered. The older it is the better, and, if used hot, it affords results that may take a day or more if used cold. The addition of a trifle of silver nitrate or some printing-out paper clippings will greatly improve the bath if it works slowly. An old bath, used cold, produces the finest prints, though, as stated, it works slowly. After the desired color is obtained, sponge the backs and faces of the prints well and wash thoroughly.

By covering certain portions with vaseline after a flesh tint is secured, other portions may be toned to another color entirely. Flesh tints can be had in the bath containing uranium nitrate, covered with vaseline and the rest toned an entirely different color. The grass, trees, etc., in a blue print can be toned green by the use of uranium solution and a brush, while many other combinations are merely dependent on the skill and ingenuity of the workman.

From the foregoing it will be seen that the worker in velox is certainly less restricted in the matter of colors than the user of printing-out papers, and that the chemical study is very interesting.

Marking system—I advise users of velox to mark the exact number of seconds required, after it is ascertained by test, on the negative for future reference. It will be found a great help if one wishes to make a print at any time later to find, for instance: "Nine seconds, one foot from four-foot gas burner, tissue diffusing screen;" or, "Foreground six seconds, sky twenty, four-foot burner one foot away."

Spotting prints—Sometimes, owing to bubbles in the developer, incomplete solution or not filtering, we get some few white or black markings. The latter are easily etched off, if small, with a penknife point, or, if large, with a rubber ink eraser, with which latter can also be added highlights by careful work. Spotting velox prints is far easier than spotting glossy prints, of course, since the surface affords an excellent "tooth" for brush or crayon. There are crayon pencils to be had which match many of the tints obtained with either metol-hydro or in the after baths, and no print should be neglected in this respect. There are, occasionally, some markings met with on velox of which no one seems to be able to explain the cause. They are not the fault of the user, probably, yet there seems no reason for their existence in so perfect a paper. There are a number of ways to eliminate them, two or three of which I shall give later. The best method is to add two to four drops of extremely dilute cyanide of potash solution to each ounce of developer (one ounce in ten of water will be right) and proceed as usual. The cyanide, it must be remembered, is deadly poison. Too much slows the development, yellows the whites and eats the half-tones away, since it reduces the print and thus produces harsh contrasts. While this is true of *too much*, we have it, on Dr. Buckland's authority, that the small amount prescribed is remarkably effective in affording prints free from surface markings.

THE TYPICAL WESTERN BEAUTY

AT THE REQUEST OF "CAMERA CRAFT" A NUMBER OF THE MOST PROMINENT WESTERN ILLUSTRATORS AND PHOTOGRAPHERS HAVE PREPARED THEIR IDEAS AS TO THE TYPICAL BEAUTY OF THE WEST FOR THE CHRISTMAS MAGAZINE. ON THE FOLLOWING PAGES WILL BE FOUND THE EMBODIMENT OF THESE IDEAS AND WE PRESENT THE WESTERN GIRL IN ALL HER GRACE AND GLORY AS OUR SHARE IN THE ARTISTIC CONTRIBUTIONS OF THE HOLIDAY SEASON.



PLATINUM PRINT
by GEORGE HABENICHT



BROMIDE PRINT
by ARNOLD GENTHE



WASH DRAWING
by LAURA E. FOSTER



CARBON
by A. T. PROCTOR



OIL, PAINTING
by JOHN WILLIAM CANTRELL



BROMIDE PRINT
by LAURA M. ADAMS



PEN AND INK
by MAX NEWBERRY



ARISTO PRINT
by E. S. CURTIS

THE FOURTH PHILADELPHIA SALON

By C. YARNALL ABBOTT

The Philadelphia Salon of 1901 presents some peculiarly interesting features. Owing to changes in the personnel of the management and in the character of the jury of selection, many of the best-known exhibitors of former years have failed to send work. This action was presumably due to the widespread impression that the high standard of the past was to be sacrificed in the attempt to "broaden" the show. The first result of this withdrawal of support was that many former exhibitors of less standing followed their leaders and also stood aloof. Consequently, while the total number of entries was larger than a year ago, the majority of the prints which came before the jury were by almost unknown people. From this aggregation, and including some invited work, about two hundred and eighty-five prints would be absurd absence of the present exhibitors of not felt. The on a lower level year. At the see no evidence attempt on the committee or jury, standard. The doubtless sincere failed, as a body, same measure of juries of former ing its selections, lieve that it has a most unfortu-

Regrettable
ness is, it presents
courageing feature.

distinctly high quality of much of the work of the new people. There are many of these who have won recognition at other exhibitions, particularly in the West, but there are others whose work comes to us without backing of any kind. It was the new man's opportunity, and I am glad to see that he has made the most of it. It is obvious, too, that this condition makes for a greater degree of versatility than was felt in the salon of last year, with its very fine, but admittedly restricted character.

The foreign work makes a good showing. Among the Frenchmen, very characteristic gum-bichromate work is sent by Pierre Dubreuil. His "Skittles" is particularly charming in arrangement, and "Meditation" is made exceedingly interesting by its graceful and unusual treatment. M. Dubreuil's group is one of the largest and, I think, the most consistent of any in the exhibition. Rene Le Begue shows a group of exceedingly undressed ladies. Such work puts a weapon into the hands of those who oppose the photography of the nude.



BY E. H. KEMP

THE DEGENERATE

AT PHILADELPHIA SALON

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BY O. H. HANSEN

REFLECTIONS

AT PHILADELPHIA SALON

Henri Breux, another Frenchman, is represented by a very commonplace lot of carbon prints.

The English work is noticeably becoming less insular of late, and the work shown here is no exception to this statement. The largest and, in many respects, the best group is shown by David Blount. His six gum prints are all well handled and, with the exception of "Sleeping Grief," well arranged. No. 36, "The Mountain Tarn"—which has been carefully catalogued as "The Mountain Farm"—is a very striking piece of work, and "The Last Pale Glimpse of Glimmering Light" is good, in spite of its title.

The rest of the English work is interesting almost without exception. I want to mention specially Colonel Gale's charming "On the Sussex Coast," John Carpenter's "Quietude," John R. Clark's "When Landsmen Sleep," Miss Bessie Stanford's "Day Dreams" and Miss Catherine Edmonds' "The Mirror." The last named is a dainty and graceful treatment of a rather well-known theme.

The almost classic outdoor work of the Baron von Gloeden, of Sicily, has long been familiar to us in reproduction, but I believe that this is the first American show at which he has been represented. His ten pictures are all large, and command attention despite their rather conventional arrangement and appalling tightness of treatment.

The only German group in the catalogue, the invited work of Otto Scharf of Krefeld, seems to have somehow gone astray; and, at the time of writing, has not appeared.

It is impossible, within the limits of this article, for me to attempt a detailed description of the American

work. I may only call attention to a few of the more striking features. One

of these is the fine group of work sent by F. Holland Day. Mr. Day was one of the few acknowledged leaders who stood by the show. His seven prints, while of greatly varying merit, have all something of the mysticism which we have come to expect in his work. The fine portrait of Maeterlinck I have had occasion elsewhere to praise. I can only mention the big and simple "Head of a Nubian;" the "Street in Algiers," which is about as far away from the conventional treatment of such a subject as may well be imagined; the charmingly delicate and French "Portrait of Madame Le B.," and the curious and interesting "Vita Mystica." Mr. Day was invited to send work without submission to the jury, but preferred to take his chance.

Miss Ben Yusuf and Mr. Francis Watts Lee were also placed by the management in the *hors concours* class, and both justified their selection by sending good and characteristic work.

Miss Anne Pilsbury's five prints are all interesting. To me, the best is No. 205, a fine portrait of a small boy.

Osborne I. Yellott's "Over the Hill" is worthy of special praise for its fine composition and good treatment of snow.

In "The Bridge," John E. Dumont of Rochester has produced a very fine thing from apparently commonplace material.

Among the newer people I want to mention Adolph Petzold of Philadelphia for his very striking composition of children in a garret, entitled "A Fairy Tale."

Miss Alice Boughton of Brooklyn is another new exhibitor who will bear watching. Her "Study in Tones" is a masterly treatment of close values, and "An Idyll" and "Eurydice Returning to Hades" are strong and original, though not quite well spaced.

Other new workers worthy of mention are W. Brancher of Philadelphia, who narrowly escaped producing a masterpiece in his "Child of the Slums"; Frank Alvord Perret of New York, who has a very good thing in "For Peace or War," a striking treatment of a battleship, and Conrad F. Haeseler, also of Philadelphia, who, in "Blessing the Bread," has essayed a tremendously difficult subject with considerable success. Praise is also due W. B. Colson of Brooklyn for a thoroughly good and consistent group of four prints, of which "The Last Row" is probably the best, and to S. Stockton Hornor of Concordville, Pa., for three very attractive little things.

The Western work — and I am including Chicago in this classification — is probably of particular interest to the readers of CAMERA CRAFT, and forms so distinct and characteristic a group that I feel warranted in considering it rather more in detail. To me, one of the most interesting things in the show is "Reflections," by O. H. Hansen of San Francisco, a simple treatment of a boat and water which is satisfactory from every standpoint. It is a real little gem.

E. La V. Bourke of Chicago shows four good things, of which "The Four Brothers, Winter," a well-composed study of trees, strikes me as the best.

Dr. F. Detlefsen's group is also clever and original, but uncertain in spacing and, with the exception of "Alter Ego," too intense in its values. The other three things are all interesting, but too black and white for their surroundings. They don't "stay on the wall."



SILENCE
by C. YARNALL, ABBOTT
(At London and Philadelphia Salons)

Oscar Maurer of San Francisco has a very good thing in "A Foggy Day," and the same thing may be said of "March," by F. E. Monteverde, also of San Francisco. The latter print is a strong and original piece of work. I am sorry not to have seen more of the work of these two men.

Arnold Genthe of San Francisco is represented, according to the catalogue, by his "Study of Head and Hand," which has always seemed a little topheavy to me. He also shows three uncatalogued portraits, all of which are, I think, better spaced than the first-mentioned thing. The "Portrait of Miss May M." is simple and dignified in treatment, while the "Portrait of Nance O'Neill" has abundant character and snap. "A San Francisco Girl" is the least interesting of the group. Mr. Genthe has made great strides in the right direction, and I hope to see really big work from him in the near future.

Another San Francisco exhibitor, W. J. Street, scores with "The Passing of a Storm." The big, diagonal sweep of clouds and smoke is very effective.

Special praise is also due S. L. Willard of Chicago for his four things. I like particularly the clever spacing and quality of "A Head," and the charming little nude "Naivete." "A Spring Song" is ambitious, but does not hold well together, and is to me a little unpleasant in tone.

Among the other Chicago prints, E. M. Blaine's "Solitude" has good quality but lacks interest. W. M. Clute's "In the Barn" is thoroughly pictorial despite its small size. Frank Green's "From the Bridge of Rush" is interesting, but not well composed. Frank Snyder's "Gathering the Sheaves" is very good in composition, but is hurt by the hardness of the horizon line. William F. James' "Tuesday" is a good thing, well handled, but I can find nothing favorable to say of his "The Entrance."

Speaking generally, the Western work is of great interest. It is, perhaps, less influenced by the style of the moment in exhibition work, and I am glad to have had the opportunity of seeing so many good examples of it. It has helped this year's Salon to maintain, in spite of vicissitudes, its position in the forefront of the new movement in Pictorial Photography.

SAN FRANCISCO PICTURES AT THE FOURTH PHILADELPHIA SALON

The California workers were not quite as successful at the Philadelphia Salon as they were at Chicago. However, a creditable showing was made, and, from expressions received from Philadelphia correspondents, it would seem that in the future the West will receive much more attention than in the past.

The San Francisco pictures accepted were as follows: "A Foggy Day," Oscar Maurer; "March," F. E. Monteverde; "Passing of a Storm," W. J. Street; "Study — Head and Hand," Arnold Genthe; "The Degenerate," E. H. Kemp; "Reflections," O. H. Hansen. Besides the pictures mentioned, the three pictures exhibited at the London Salon by Arnold Genthe were shown at the request of the Salon management.

Since receiving the article on the Philadelphia Salon from Mr. C. Varnall Abbott, the information comes that he has been made a member of the famous Linked Ring. This adds interest to what he has to say of the exhibition.

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H. D'ARCY POWER, M. D., O. V. LANGE, THEODORE KYTKA

VOL. IV.

SAN FRANCISCO, CALIFORNIA, DECEMBER, 1901

No. 2



—laughing faces light up with fun and frolic * * *
and happiness beams from every countenance—

group. Perhaps the family may never again be assembled under one roof; the grim visitor may creep in during the year to come and carry off the very flower of the flock; a son may be with his fellows in blue under a foreign sky, and then the precious value of the photograph made at the joyful Christmas tide is realized.

The very spirit of the holidays seems to creep into the pictures, laughing faces light up with fun and frolic, mirth resounds on every hand and happiness beams from every countenance. Let us make pictures during the gladsome time of the year; they will cheer us when things are not so bright.

Although the time in which pictures may be submitted for the Second San Francisco Photographic Salon expires on December 9th, CAMERA CRAFT is assured by the Salon management that pictures forwarded from the shipping point on the ninth will be accepted.

More and more as the years
HOLIDAY go by photography enters
PICTURES into the pastimes and pleasures of the holiday season.

Where fond parents once presented their offspring with useless and expensive mechanical toys, cameras now serve their purpose. From the tiny Brownie to the luxurious, morocco-finished instrument the gamut runs. The era of common sense in present making has been responsible for the rooting out of many an old-time custom, but never has the tendency flowed in a better direction. The camera as a present is growing in favor, and the thinking parents are beginning to realize its educational value.

Again, the pleasure of the family gathering during the holidays is not complete until a picture is made of the

THE
PHILADELPHIA
SALON

Our Philadelphia representative, Mr. C. Yarnall Abbott, writing upon the Fourth Philadelphia Salon in this issue, makes public a regrettable condition of affairs, which, in a manner, affected the success of the exhibition. It would not be wise for us to criticize our brethren from this distance, for we have no knowledge of the local feeling or conditions responsible for the situation. We cannot but believe, however, that the "acknowledged leaders" in photographic circles in the East exhibited but little of that broadness of mind supposed to exist in every brotherhood.

Every photographer has the right to refuse to submit his work to a jury the personnel of which is objectionable to him, and we can readily understand such action on the part of a worker who has not yet obtained the title of "acknowledged leader," but for the "acknowledged leaders" to withdraw in a body is too much for our understanding. Are we to presume that the work of the "acknowledged leaders" is too good for the Academy of Fine Arts, or does the action resolve itself into a simple boycott of the show?

We have but little to suggest to our Philadelphia brethren, who seem to have made a pretty good show despite the defection of the "acknowledged leaders," other than to keep a stiff upper lip. The gentlemen who compose "the acknowledged leadership" have, so far, fed their vanity upon the comment caused by their action. When this ceases to be a nine-day wonder they will sink into the obscurity whence the "acknowledged leaders" sprung.

CAMERA CRAFT believes that the thanks of the California Camera Club and the Salon management are due to Mr. Charles A. Goe of the Committee on Publicity. Mr. Goe has thus far shouldered all of the detail work of the Salon, producing results that cannot but have a favorable effect upon the success of the exhibition.



BY EDWIN R. JACKSON

CHRISTMAS MORNING

A PHOTOGRAPHIC COMMENTARY

BEING A CRITICAL DIGEST OF
RECENT WORK

CONDUCTED BY H. D'ARCY POWER, M. D.

THE PERMANGANATE REDUCER

Professor Namias, in a recent communication on this subject, is more than ever assured of the value of this reducer (he uses potassium permanganate, 0.5 grains; sulphuric acid, 10 c. c.; water, a litre), but he points out that in removing occasional stains of manganese with oxalic acid, it may sometimes happen that silver may be precipitated, which later may turn yellow. This may be entirely prevented by immersing the plate, after reduction, in a fifteen-per-cent solution of sodium sulphite to which three per cent of oxalic acid has been added.

A NEW MAGNESIUM LIGHT

Ch. Martin, in a communication to the *Bulletin* of the Belgen Photo Club, states that a slow-burning light of the most intense brilliancy may be obtained in the following manner:

From thirty to one hundred grains of magnesium powder are mixed with sufficient water to make a wet paste, and a little dry powder spread over the top. The latter is fired with a wick moistened with alcohol. This wet magnesium is fired by the heat of the burning dry powder, and obtains the oxygen for its combustion by the decomposition of the water mixed with it. Not only is the light more brilliant than that of the dry powder, but it is smokeless, as the magnesia produced remains caked. In place of wet magnesium, powdered aluminum bronze may be used, with the production of a still more brilliant light.

Since writing the above, I tried the experiment. I found it almost impossible to fire the dry magnesium by means of an alcohol fuse, but by substituting a piece of magnesium I was successful. This readily burned away and left a white cake of magnesia, as stated, but it appeared to me that the light was much less than the same amount of magnesium would have produced in a blow through lamp.

SINGLE TRANSFER PAPER FOR CARBON

In answer to an inquiry, *Photography* recently gave the following methods for preparing single transfer paper. From a somewhat

extended experience I am greatly in favor of the first of these methods. I might here mention that, some time ago, I tried formaline in place of chrome alum to set the gelatine. It gave me what appeared to be excellent paper. But, on development, the prints were all fogged. Evidently the retained formaline insolubilized the gelatine of the tissue:

In our own practice we prepare a solution of gelatine of a strength of five per cent. An ounce of Heinrich's gelatine allowed to soak in a pint of cold water and then, when thoroughly soft, warmed up to a temperature of about 150° Fahr., answers excellently. The paper is floated on this solution, or it is brushed on hot, and allowed to set. As thin a coating as possible should be given. When it has set, which should be within about five minutes, and before it has begun to dry, the paper should be placed in a three-per-cent solution of chrome alum for five minutes, rinsed once or twice in water and then hung up to dry.

An alternative method is to immerse the paper after coating with the gelatine in a solution of potassium bichromate of a strength of fifteen grains to the ounce of water. It is then dried and exposed to daylight for an hour or two, when the gelatine is rendered quite insoluble.

Another method, which does not succeed so well with many workers, is to add chrome alum slowly to the gelatine solution before applying it to the paper. An ounce of Heinrich's gelatine is allowed to swell and then dissolved in half a pint of cold water, as already described. Ten grains of chrome alum are dissolved in half a pint of water and added to the already hot gelatine solution. The paper is then coated with this.

TO TRANSFER CARBON PRINTS TO GLASS

The glass should be well cleaned and then given a substratum, and a good one is: Hard gelatine, 320 grains, or 32 grams; water, 20 ounces, or 1000 c. c. Soak for an hour, and then dissolve by the aid of heat; then add chrome alum, 12 grains, or 1.2 grams, water, 4 ounces, or 200 c. c. The solution will become very thick; then glacial acetic acid should be cautiously added and stirred till it becomes fluid again, and this should be just flowed over the plates, and they should be set up to drain and dry; and then the process of transfer is, of course, the same as with paper.

Mr. L. D. Hicks left for Chicago and the East November 24th, to be gone some weeks.

IN PROFESSIONAL FIELDS

AN IDEA OR TWO EACH MONTH

CONDUCTED BY O. V. LANGE

LATER INVESTIGATIONS IN PRINTING ON RECORD PAPER

Since writing an article on a similar subject in the *CAMERA CRAFT* of last January, I have been approached by letter and also personally, and asked to give a description of my latest practical results in printing by the ammonia nitrate-of-silver process upon cardboard surface and the different writing and record papers. This time I will devote myself to the latter, because the time may come very soon when the process will be of great practical benefit in the photographing and preserving of valuable records. The manufacture of the modern American linen papers is absolutely faultless as regards blemishes or metallic spots of any kind, and I have found them equal to the very best European papers. There is a great variety of papers from which to select, from the very thin parchment to the heaviest grade of bond paper. The latter, in my experience, is the best adapted to this plain silver printing process. The brand is by Byron Wesson super-royal record paper. This adapts itself very readily to all the photographic manipulations through which it has to go, as it is not porous, has a smooth, hard surface, does not need extra sizing as the softer papers do, and is just as tough and strong while wet as when dry. The two sides of this paper are quite dissimilar. One is smooth and has what may be termed an "eggshell" surface. The other side has small, irregular pits, which become very evident in the finished print and are somewhat disturbing. Therefore, after chlorizing and after the paper has been dried, all the sheets should be carefully selected and placed with the eggshell surface uppermost before commencing to silver them. The treatment of this paper, as regards drying, must be more particularly attended to than the cardboard mentioned in the previous article (page 251, vol. II), because the least suspicion of dampness will keep the silver solution from combining chemically with the ammonia-chloride (six grains to the ounce) in which the paper has previously been dipped. After the thorough drying of this paper it is treated in the same way as cardboard, by applying the

silver solution with a cotton flannel swab wrapped around a piece of glass. It is then again thoroughly dried over an oil flame, after which it is ready for the printing frame. The depth of printing should be less than for solio. After three preliminary washings in plain water, it is toned in a bicarbonate of soda gold toning-bath. The toning can then be carried on further than with the ordinary papers. A rich velvety black effect can be obtained. Fixing and final washing should be extra long for this paper.

PHOTOGRAPHY AND LEGAL RECORDS

It has recently been brought to notice that the photographing of legal documents has been in vogue in Eastern and European cities, giving entire satisfaction. There is an able article in the *Journal of the Franklin Institute*, by Henry Leffmann, in which he describes at some length the legal and practical advantages of photographic methods over the slow, cumbersome and inaccurate ways now practiced. I might state here, before proceeding farther, that some years ago, I remember, an attempt of this kind was made in San Jose, but, owing to the unscientific way in which it was begun, the work was not continued. Among other things, the above writer states that: "A very important record department is that of the register of wills. In this city, and, I believe, generally, it is the rule to preserve the original document and furnish to interested parties a certified copy. The original may be seen by any one. These methods are obviously open to the same objections that apply to the transcription of deeds and mortgages, with the additional one that, as the original is open to inspection, it may be liable to injury. The number of wills registered in a city is considerable. A lawyer in this city told me that a will was filed not long ago in a city of Western Pennsylvania, of which three official copies were furnished by the recorder's office and all the copies differed, although all were duly certified as exact. * * * When the systems of transcription were inaugurated the possibilities of photography were not only unknown, but were not even suspected. At

the present day the art of duplication of writing or drawing has been brought to a high degree of perfection. Several methods are known by which reproduction can be accomplished rapidly, accurately and cheaply.

"Briefly, I propose that of all documents which are to be copied for record a negative should be made, either full size or somewhat reduced, if thought permissible, and from the negative prints should be made by the best processes. The paper must be of the best quality, especially as to its resistance to decay.

"There is nothing in the problem that is uncertain or indefinite. Photography of this character can be carried out independently of weather or time of day. Permanent pictures may be made and control may be exercised over the work at all points."

As regards the general scheme which this writer has outlined I fully agree. But there are technical details which he has not elaborated upon at all that I have already investigated and practically applied. I will describe them more fully in a future article, showing specimens of work.

A SUGGESTION FOR THE CHRISTMAS TRADE

It seems strange to me that more use has not been made of transparencies as a commercial article by the professional photographer, and also as an adornment to his reception-room windows, because they are as easily and as quickly made as a velox print, and are developed and fixed with the same solutions. The only extra work upon them after they are dried lies in backing them with an extra piece of glass, either ground or varnished with ground-glass substitute, which is put next to the film.

It must be framed, and for this purpose there are manufactured, and may be bought from any stock house, metallic frames that are not expensive.

There are two distinct ideas I wish to elaborate upon. One is the technical and artistic side, the other the business part. Although I have said that it is very easy to make these transparencies, still there are certain minor details that must be attended to. The negative to be employed should be one that is perfectly clear and of good density. The exposure can be made either by contact or through the camera. The result is practically the same. I find that the 8 x 10 size is the best, as it is not too large for an average window adornment, nor will it be too ex-

pensive if it is made to be sold. Almost any one of the modern coal-tar developers you are in the habit of using may be employed, by the addition of a few drops of a ten-per-cent solution of bromide of ammonia or potassium. The fixing should be done in an acid fixing bath and the transparency left in this solution more than as long again as you leave a negative after it is fixed. The reason for this is obvious. It will have a much severer test as to its permanency than the average negative, as it is intended to be exposed to a more or less glaring light for years to come, and the film is subject to sudden changes of humidity. Therefore, it would be a very good precaution to varnish the transparency with regular negative varnish before mounting it. This will make it practically indestructible. So much for the technical part.

It may be asked what subjects the average portrait photographer had better use. I am sure that one of the best negatives of a young girl in a fancy position, in costume, or a particularly good negative of some baby on a cabinet-sized plate, may be advantageously enlarged in the camera to a 6½ x 8½ or an 8 x 10. If the selection is well made, taking into consideration the probability of the customer buying, especially during the coming holidays, quite a revenue may easily be derived from this source.

A SPLENDID EXHIBITION

One of the most interesting art exhibitions ever held on the Pacific Coast is now under way at the art store of William Morris, 248 Sutter Street. Many noted European painters are represented, among them being J. H. Dolph, whose animal pictures created a furore at the Academy; William Chase, the celebrated landscape artist, and Bomppard, a Venetian painter whose conceptions contain mystery and color such as only the Venetian school possesses. Several canvases by Bridgeman are also on the walls.

Among the American artists of note represented in the exhibition are H. W. Hansen, whose water colors of Western life are well known locally, and Manuel Valencia, a young painter whose earnest study in Mexico during the past few years has amply fitted him for work on California subjects. Several mission pictures by this artist have attracted much attention for their originality.

The exhibition will be under way several weeks, and no lover of the beautiful should miss the opportunity of seeing this, the choicest exhibition of the year.

WITH THE AMATEUR

A DEPARTMENT FOR THE BEGINNER WITH
A FEW SUGGESTIONS FOR THE STUDENT.

Now is the time for slide making, when, during the long evenings, the gems of our past year's work may be reproduced in this most striking of all photographic methods. The Japanese are famous for their colored transparencies, that, with perfect tinting, show no sign of brush work. Dr. Georg Hauberrisser has worked out a method similar, if not identical, with theirs, of which the following details are given by the *Photogram*:

"After a number of experiments, I have found that a strong solution of gum — about twenty-five per cent — to which certain aniline dyes are added, gives a perfect and uniform colored area when flowed on to a level glass plate, and shows no dark edges on drying. On this fact I have worked out a process of coloring slides which gives results equal to the Japanese.

"To prepare the gum solution, place 125 parts of best clear gum-arabic in a linen bag and suspend in 400 parts of water. In a day or so the gum will be all dissolved. The solution is filtered, and the last trace of the liquid pressed out of the linen bag with the fingers. Water is added till the whole measures 500 parts; about 10 parts of glycerine are added, as well as a little antiseptic, say 6 to 8 parts of a one-per-cent solution of carbolic acid in alcohol. Suitable dyes for the process are not very common. A few recommended are: Brilliant yellow S., carbazol yellow, bright olive green, dark olive, Sorberi red, naphthol red, methylene blue, methyl violet, B., negro-sin W. L. Most of these colors are the "Badische Anilin and Soda Fabrik" products, and are procurable from the large chemists.

"As before mentioned, the slide must be horizontal when the color is applied. Hence, one must illuminate it from below. A small box, with its side and top removed, is provided with four leveling screws. In place of the cover a glass plate is fixed, and, in order to cut off side light, a shade made from a piece of card is placed over, the wings being fastened to the sides of the box.

"The glass plates having been leveled by the screws at the base of the box, the dye-

plus-gum solutions are made ready, and their color judged on a clean glass plate laid by the side of the transparency. The first condition for success is to apply the gum as a thick film; it will not then run about on the film. If the color is too dark, dilute with twenty-five-per-cent gum solution, not with water. It is generally best to apply the liquids in drops so as to avoid air bubbles. One part should not be colored until the adjoining part has dried, though sometimes—*e. g.*, evening clouds against foliage—it is no disadvantage if a slight blending of the colors takes place along the line between the two parts.

"One color can be applied on the top of another if the second gum solution be very carefully applied; but it is better to protect the first film by flowing over—after drying—a thin solution of gelatine or albumen and allowing to dry."

SKETCHING
UPON
SENSITIZED
PLATES

There is a method I have not noticed published, and that is the writing or making a sketch upon an exposed plate. An ordinary plate is taken and exposed to the light for a second or two to thoroughly change it. The ink is then made up of a strong developer, and the film written or drawn upon, when, of course, reduction of the silver rapidly takes place as you write. Afterward, the plate may be fixed and washed in the usual way.—*Photographic News*.

WATERPROOF
VARNISH

Some months ago I stated that shellac and borax made a good waterproof paper in aqueous solution, but that the proportions were not to be had. I have since found out the formula, and as it makes fine paper for flexible support for carbon work, besides being useful in many other ways, I give the formula:

Shellac.....	3 parts
Borax.....	1 part
Water.....	30 parts

Boil until dissolved. If this paper is used for carbons it must, of course, be waxed before each use.—*Mr. Newcomb in Professional and Amateur Photography*.

BUSINESS NOTES

Among the fall entries of the Guerin College were quite a number of professionals of from two to twenty-nine years' experience, some being well up in the art, these enrolling for the special course to brush up in the different branches.

The development of dry plates has been rendered much more satisfactory by the introduction of the soda carbonate chemically pure and soda sulphite anhydrous, by the Mallinckrodt Chemical Works of St. Louis and New York. These salts possess the one very important essential, and that is absolute purity. They are also prepared so that they are uniform in composition, which is an important consideration in making up developing solutions.

W. E. Dassonville and H. C. Lassen have opened a studio in the Flood Building. The fittings have been carefully arranged, and the studio is one of the neatest in the city.

Oscar Maurer returned from Paris recently and has opened a studio at 139 Stockton Street.

An exhibition of water colors by the famous Japanese artist, Fukawa J. Basuke, is scheduled by William Morris in December. This artist studied abroad and in the United States, and his pictures show the effect of his foreign training.

The Miniature Portrait Company informs us that by the first of January their store and factory, which was recently destroyed by fire, will be completely restored, many improvements being made. Meanwhile, work is being proceeded with by a full force, and all of the work is being turned out with the old-time regularity.

Mr. J. Holler, the well-known photographer, is now in charge of the photographic and button departments, which will ensure the continued excellence of the work from this firm.

Many improvements have been made in the store of Messrs. Hirsch & Kaiser, modern appliances and office fixtures having been installed. The office has been removed to a balcony overlooking the store, thus giving more space for the display of stock.

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For Sale—Half interest in leading studio in county seat of 10,000. Elegantly furnished; modern ribbed-glass slant light. Increasing business, now about \$400 a month. Best prices in the state. Purchaser to operate and retouch. \$1000. Address Hirsch & Kaiser, S. F.

For Sale—Good paying gallery in live town of 2000, twenty-five miles from city. Fully equipped. Address C., care of CAMERA CRAFT.

Wanted—Position as operator or retoucher. Can print also. California preferred. Would rent studio with privilege of buying or manage it for owner. Fifteen years' experience. Address C. B., care of CAMERA CRAFT.

For Sale—\$75 cash. One matched pair Goerz III. lenses, No. 2; 4½ x 6½; 7-inch focus; cost \$105; matched never used. H. Lyons, Elkhart, Ind.

At—Lady retoucher is equipped to do piece work for the Trade, usual prices. Satisfaction guaranteed. Mrs. E. W. Bennett, 515½ Bush St., San Francisco, Cal.

For Sale—Photo gallery in city of 4000 inhabitants, paying \$100 per month; \$600 cash. This is a bargain to bear inspection. Address L. B., CAMERA CRAFT.

Young lady, good printer and toner, also develops and copies, wishes position. State hours and pay. M. B., P. O. box 802, Fresno, Cal. References.

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A ROMAN MAID
by F. E. MONTEVERDE
SAN FRANCISCO

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IV.

SAN FRANCISCO, CALIFORNIA, JANUARY, 1902

No. 3

THE SECOND SAN FRANCISCO PHOTOGRAPHIC SALON, ITS STRONG AND WEAK POINTS WITH A CRITICISM OF ITS STRIKING FEATURES

When CAMERA CRAFT first suggested the idea of a Photographic Salon it did not do so without much thought and deliberation. The fact that the artistic workers of the West, at that time, comprised but a small proportion of the photographers in the United States, and the unknown quantity of eastern support together with the absence of anything like coherent action on the part of the western photographers were all taken into consideration and discussed by the staff members. It was not until September, 1900, that definite action was taken. During this month the officers of the San Francisco Art Association and the California Camera Club were invited to meet the members of the CAMERA CRAFT Staff in conference. As a result of this meeting the San Francisco Photographic Salon was organized. The success of the first exhibition was phenomenal and aroused the enthusiasm of all connected with it.

Preparations for the second exhibition were more deliberate and, having the prestige of the first exhibition behind it, the results have been far ahead of expectations. From over a thousand prints submitted, four hundred and fifty have been hung. While this average is considerably larger than that of last year, the standard does not seem to have suffered, and although there is an absence of pictures that stand out strongly from the rest, this is in part accounted for by the prevailing high class of the work. In comparing the average of the pictures with those of last year the critic cannot but notice the presence of a uniformly higher class of work, work showing more effort and with less of the stilted effects that characterized the first exhibition.

A trip around the walls will convince anyone of the fact that this year's Salon is essentially a portrait Salon. Nearly a fourth of the pictures are portraits possessing merit of extraordinary worth, and in this respect the exhibition will be a surprise to the public and the photographers.

One of the weak points of the Salon is the absence of anything like a representative collection of pictures that can be identified as Western. True, there are many marines and some few Indian and Chinese pictures, with some scattering bits of California scenery, but for the most part an ordinary observer, were he placed in the midst of the exhibition without knowing its location, could not tell whether he was attending an Eastern or a Western Salon.

One feature of the Salon especially gratifying to CAMERA CRAFT is the splendid support of the workers from the Pacific Northwest. Much has been done by the Magazine to stimulate the interest of this section in the success of



ITALIAN STREET DANCERS

BY E. H. KEMP, SAN FRANCISCO

the show and the handsome manner in which the Oregon photographers have responded is more than pleasing. As a whole, the work from Oregon will compare favorably with that of California in the pictorial field, some of the most characteristic western pictures having been submitted by workers from this State.

Another feature that cannot but be pleasing to the Salon management is the liberal support from prominent foreign workers. Many names will be found on the list that have never before appeared in an American exhibition.

The social features of this year's Salon, as suggested by CAMERA CRAFT, will be much more elaborate than last year. Three public reception nights have been arranged so far with a prospect of more. The opening night, January 9th, will be the occasion of the regular reception of the members of the San Francisco Art Association and of the California Camera Club. On each succeeding Thursday night until the Salon closes there will be a public reception during the evening.

The following members of the San Francisco Art Association and the California Camera Club have been named as a Reception Committee, to serve on the reception nights, January, 9th, 16th and 23d:

J. W. Erwin, president California Camera Club; Willis E. Davis, vice-president San Francisco Art Association; W. B. Webster, Henry Heyman, W. E. Palmer; L. P. Latimer, vice-president San Francisco Art Association; W. J. Street, H. B. Hosmer, Charles A. Goe, John A. Stanton, A. L. Coombs, Carl E. Ackerman, A. G. McFarland.

TODAY AND YESTERDAY—SOME COMMENTS BY THE CHAIRMAN OF THE SELECTION COMMITTEE OF THE SALON OF 1902

I well remember a dinner of that dear old organization—the parent, in point of fact, of the California Camera Club—the Pacific Coast Amateur Photographic Association. There was no fault to be found with the amiable lot of cranks who formed this society; but many were the criticisms which were aimed at the mouthful of words which made up its name, and to which I agreed as cheerfully then as I do now.

It was our custom to have dinners once a year, and on the occasion I now have in mind Papa G—— was down for a toast. We called him Papa because, in point of general knowledge, he was the Nestor of the crowd, and in acknowledgement of his trials, tribulations, failures and successes, we had given him this toast: "All things I thought I knew; but now I know I know the more I know I know the less."

The jingle of these lines came back to me as I surveyed the result of the labors of the Hanging Committee of the Salon of 1902 in boiling down some thousand offerings into some four hundred and fifty exhibits. Looking backward over some twenty years' dabbling in the art photographic, the questions arose within me: "What, after all, hath time accomplished here? Has there actually been a steady progression, an improvement, a bettering? Is there anything that is strictly new or novel or worth the study of the artist? Has Photography actually won admission through the doors that only open to him who knows?" The answers that came to my self-imposed queries furnished





THEODORA
by FRANCIS WATTS LEE
BOSTON



REBEKAH
by FRANK EUGENE
NEW YORK

food for reverie. I earnestly believe that Photography has at last won her greatest triumph; that she is now, through the constant hammering of her



MADONNA

BY ESSIE COLLINS, COLUMBUS, OHIO

patient and faithful devotees upon the gateposts, being accorded a fellowship in the domain of fine arts.

And here is the anomaly: Take Lea's book on Photography, published, now, over thirty years ago. Put into the hands of the photographer of today only the apparatus he suggests, and let him follow only the processes Lea describes, and any picture in the Salon may be practically duplicated, so far as mere effects are concerned. Where, then, is the change? I hold that it is not so much a change as it is a steady improvement, the gradual development of an idea, an increase in refinement. He who, ten years ago, could produce a Salon picture, is now but one of many. And that, after all, is the triumph, for the narrowing of the breach between the worst of yesterday and the best of today is a victory which entitles us to a little self-gratulation.

The distinguishing difference between the work of the camera of today and that of yesterday may be expressed in one word—"tone"; or, borrowing a descriptive word from the painters, "color." For it is possible for a study in monochrome to possess color, or, more properly speaking, to suggest it; and if, in addition, it have that pleasing arrangement of objects which we call composition, and underlying it all a good subject—what the French call a *raison d'être*—the result will be a picture—a salon picture. And it seems strange that the secret has been so long obscured to the enthusiasts who love the camera. It is not new to those who love pictures, who study engravings,

etchings and allied works, and who unfalteringly follow the lantern held by disciples who have long since solved the rudimentary principles of art. They saw, many years ago, that the photographer who would rise above mediocrity must work and study and think. This little coterie of painstaking enthusiasts has been the nucleus, and around them, at first, gathered a class who merely copied what we may term "Salon Photography." The attitude of the latter was not without humor, for at first no one cried louder than they or were more derisive of the work of the so-called fuzzy-typers. But their cries have become



PORTRAIT OF CHARLES DICKMAN

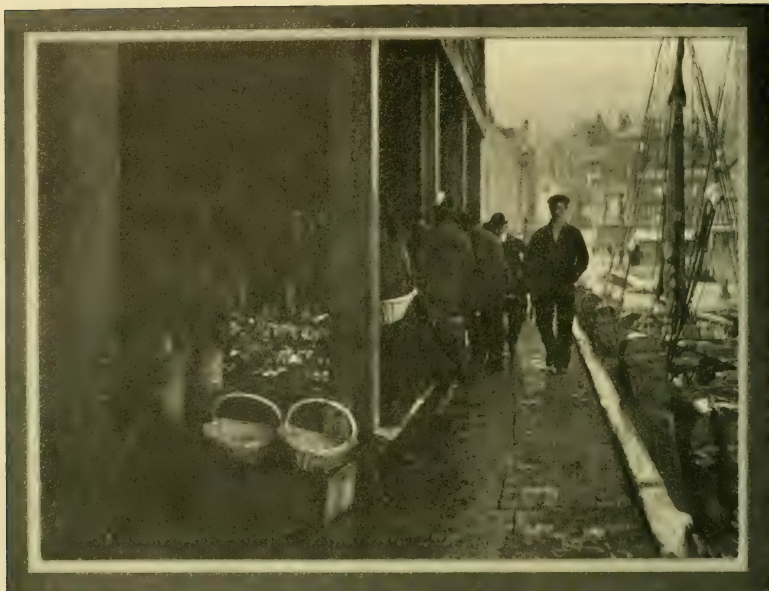
BY W. E. DASSONVILLE, SAN FRANCISCO



AN OCTOBER SUNSET
by EDWARD LATELLE BOURKE
CHICAGO



PINES OF ANNISQUAN
by H. B. PARKER
LA GRANGE, ILL.



THE FISH MARKET

BY T. F. BROGDEN, ENGLAND

less and less, and it is only the hard-hearted who reject the hand of the repentant. If one may judge from the catalogues of recent exhibitions throughout the country, the brotherhood of the camera is now of one faith.

I do not wish to be understood as saying that I believe in some of those woolly affairs which masquerade under the name of "artistic photography." Far from it. I would as soon laugh at a joke bereft of its point in the telling. Refinement is a necessary, an indispensable virtue in every picture; and while sometimes a print, all the objects of which are out of focus, will, nevertheless, be attractive as a picture, it is an exception proving the rule, rather than representing the rule itself.

"Where shall the line be drawn?" asks some inquisitive, if not ironical reader. Ah! there's the rub. I can only answer by repeating the old, old story of the painter who, when asked what he mixed with his colors, answered "Brains." One might as well ask: "In writing a novel, what degree of attention should be given to the various characters? Which should be accented, which made subservient?" To which, if I were called upon for a reply, I would again resort to parable rather than direct response, and remind the reader of the celebrated answer given to the query, "Is marriage a failure?" which answer, it will be remembered, was, "It all depends."

The definition of the objects in a photograph is one thing, and tone or color values another; and of the two I consider the latter of more importance. You can excuse a picture which is too sharp, as well as one which is too little defined, if both be in tone, providing, always, that the subject matter be worthy. But shadows darker than the darkest night, and high-lights lighter

than a chalk cliff in sunshine—what can excuse such anachronisms? These were the sins against which such writers as Emerson and other stalwarts, now with pleading and now with scolding, have inveighed, often without appreciation, and often without comprehension. The fact, therefore, that photographers are coming to a realization of the necessity for what has been termed "tonality" is matter for congratulation. It was this achievement that was essential before Photography, however long it knocked, could safely pass the sacred portals.

The praise which the cultivated mind will instinctively give to the general excellence of the work of the Salon of 1902 as a whole, neither will nor should extend to the framing of quite a number of exhibits. It is often a matter of difficulty, if not uncertainty, to properly frame an oil painting; but with anything in black or white there should be little trouble, if one will but bear in mind the absolute necessity for simplicity. It is incomprehensible that the photographer should strive so hard to keep his print in tone, and then permit it to be surmounted by a hideous affair in the way of a frame that throws everything out of harmony as to color, or which jars upon the senses because of an incongruous shape that throws everything out of harmony, or which jars upon the senses because of its triviality. What the art of dressing is to a woman, framing is to a picture. Let her be ever so pretty, if she fails to



THE WHISTLER

BY H. C. LEAT, ENGLAND



A CHALLENGE
by ARNOLD GENTHE
SAN FRANCISCO

observe good taste and a proper sense of relation, her beauty is at once negated through lack of proper setting.

A good way to take lessons in framing is to study the framing of those who know. There is really no other way. The rules applicable to framing are very simple, and a frame which sets off a print, and enhances its good features, is no more expensive than one which spoils it. A mat of tarboard, and a narrow strip of molding, the latter neither too dark nor too light, will become almost any print which is low in tone. A cut-out of cardboard, or what is known as an English mat, of a tint in keeping with the print it encloses, surrounded by a simple molding, will materially improve a print in which half-tones predominate. Another method is to bind the cover glass and the mounted print with strips of paper, bending the edges over the front and back. This is a very easy process, which any handy person can readily learn in a few minutes of experimenting. Dark prints should not have light mounts, and light prints should not have dark mounts. The aim should ever be in the direction of simplicity, and the avoidance of heaviness and strong contrast. While the mission of the frame is to form a setting for that which it encloses, it should always be secondary, helping the print by giving it additional refinement.

Let us now consider the subject matter, the themes — the songs in fact, of the medley of prints upon the walls of the Salon of 1902. Pick out your favorite prints and see if I am not right in saying that they will be the least pretentious, the simplest in theme and tone and setting. Why is it that they charm you and make you return again and yet again to them? Some wise man has said that a picture is good in the proportion that it makes you think. To this might be added that one will think most, so far as beauty is concerned, over the things that are simplest. This is because the intelligent mind objects to too much explanation. But in any event there must be knowledge of the subject. A man who never saw a sunset could never appreciate the painting of a sunset. A man who never studied the opalescent tints of early morning, certainly could not intelligently criticize a picture representing that moment of Nature's softest loveliness. A man who had never visited the Yosemite Valley could not comprehend a painting of it as much as one who had actually worshiped in that great cathedral of God. Appreciation, in other words, is absolutely dependent upon knowledge.

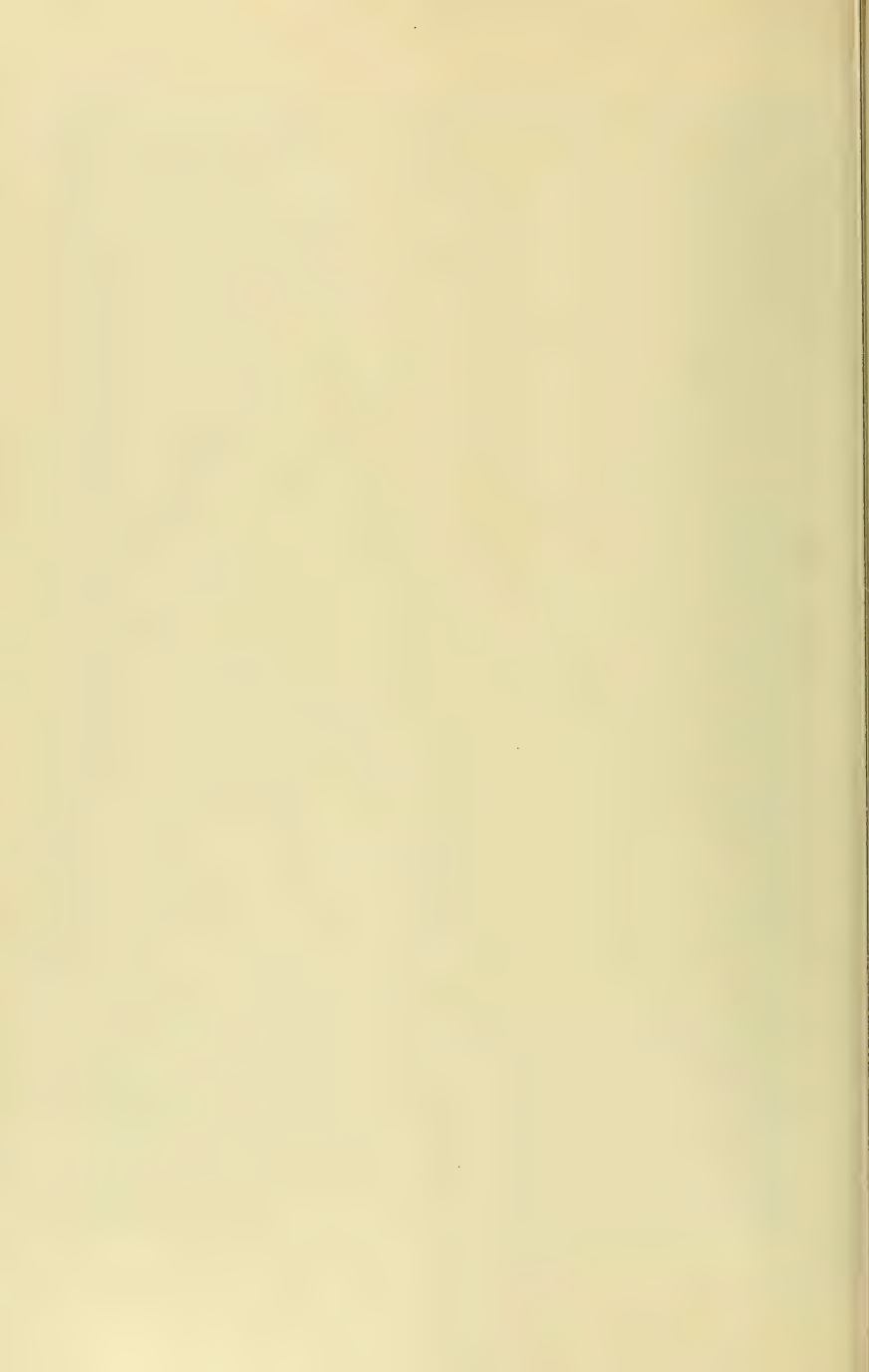
Let me close by the illustration of what I mean by the song of a picture. There is in the exhibition the picture of a child. There are a number of pictures of children, so I am safe in individualizing. It is simply done, simply framed. It is but a portrait. It is excellent in tone, well arranged in point of composition. You look at it and away from it, and then at it again. You go away and return. You study it to find the secret of its charm. It evades you; and the very fact that you cannot at once determine the secret of attraction, holds you. At last you discover, as you always will if you meditate, that the photographer has, through the medium of his art, impressed you with the naivete, the ingenuousness, the unconsciousness of childhood. His picture is but the means to an end. Yet he has attained the highest mission of the artist. He has typified the simplicity of childhood.



POVERTY
by JOHN DOLMAN
PHILADELPHIA

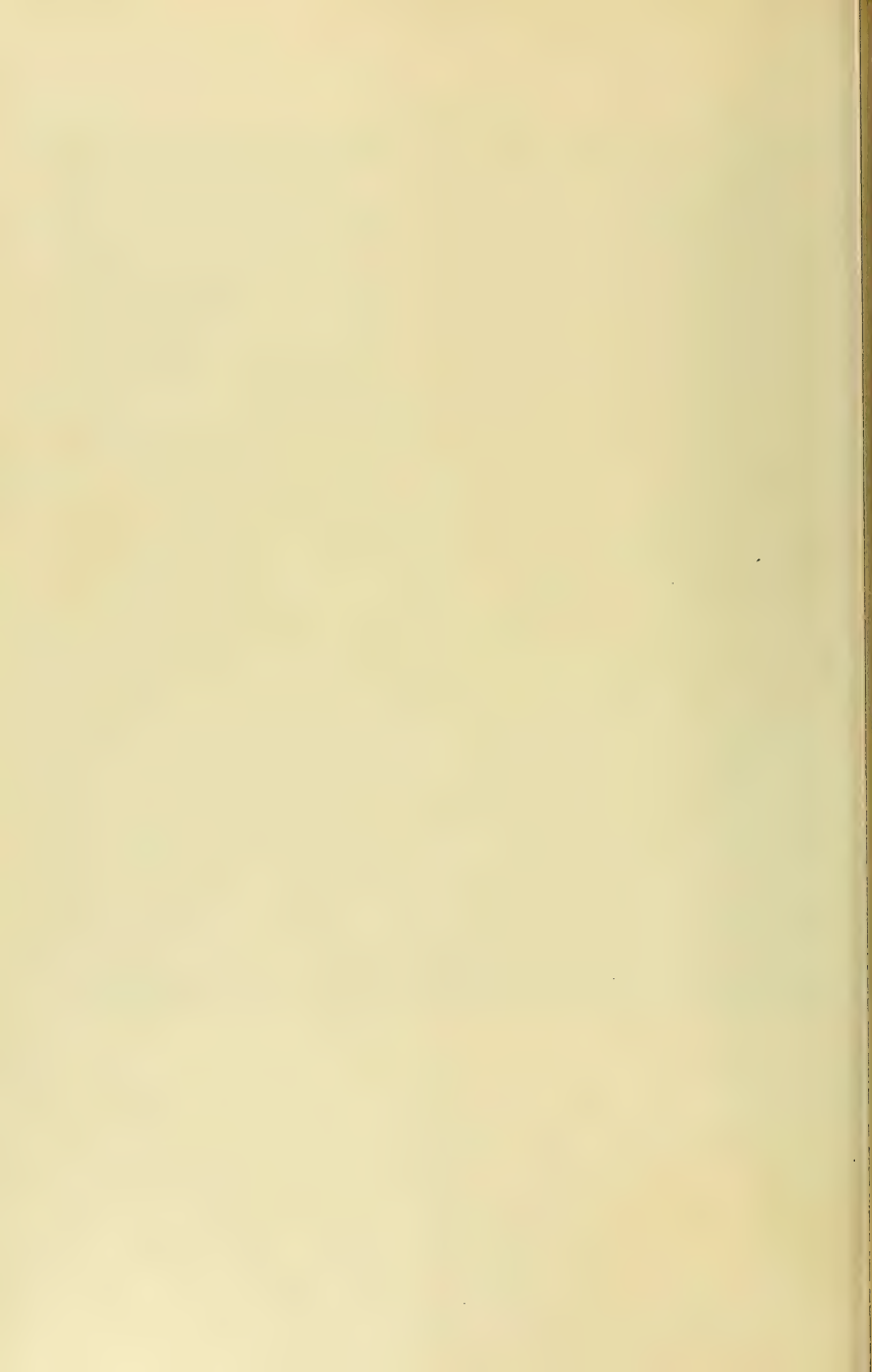
LEADING PICTURES BY WESTERN
WORKERS IN THE SECOND SAN
FRANCISCO PHOTOGRAPHIC SALON
AT THE MARK HOPKINS INSTI-
TUTE OF ART, SAN FRANCISCO
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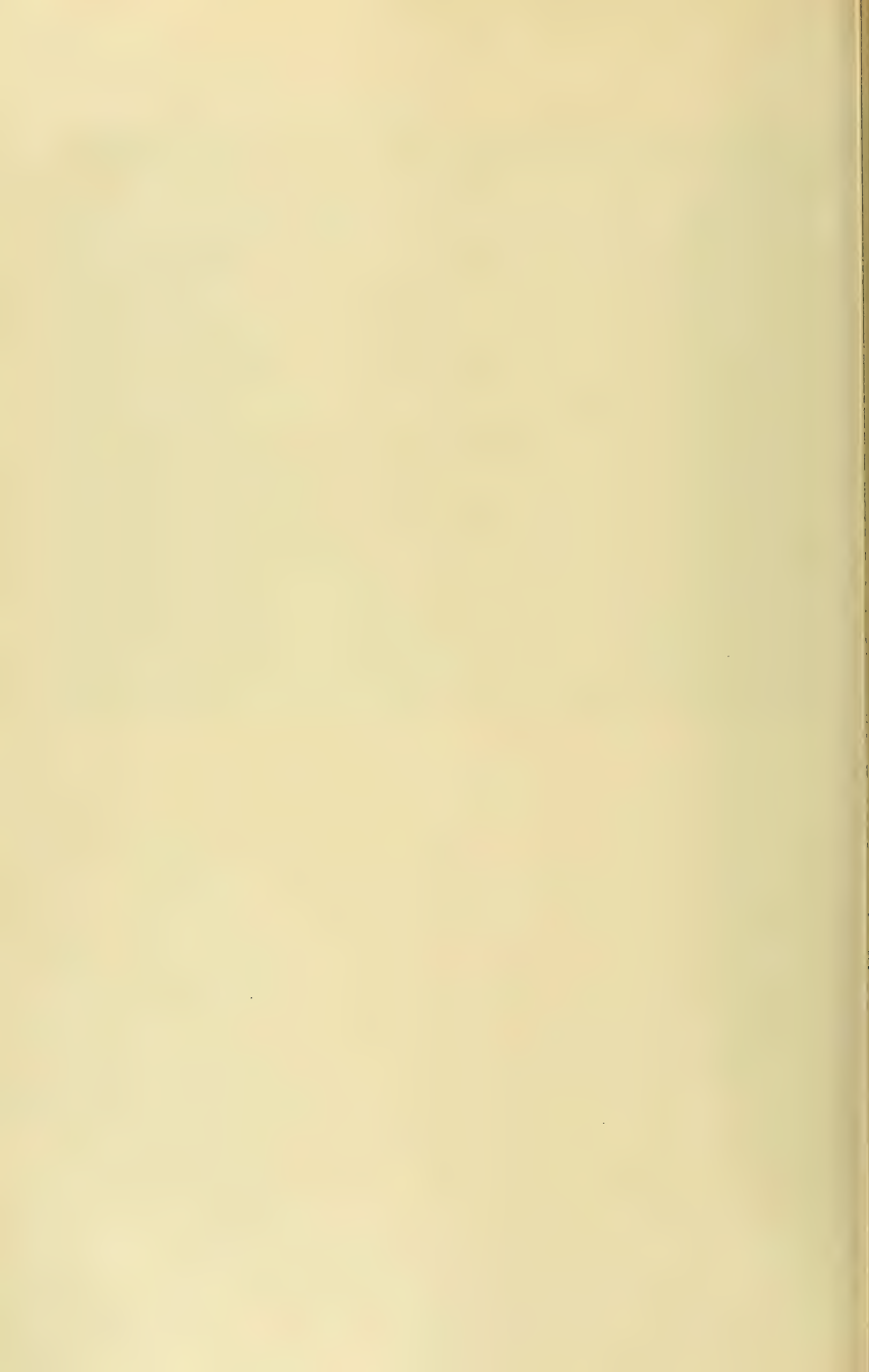


THE GOSSIPS
by OSCAR MAURER
SAN FRANCISCO



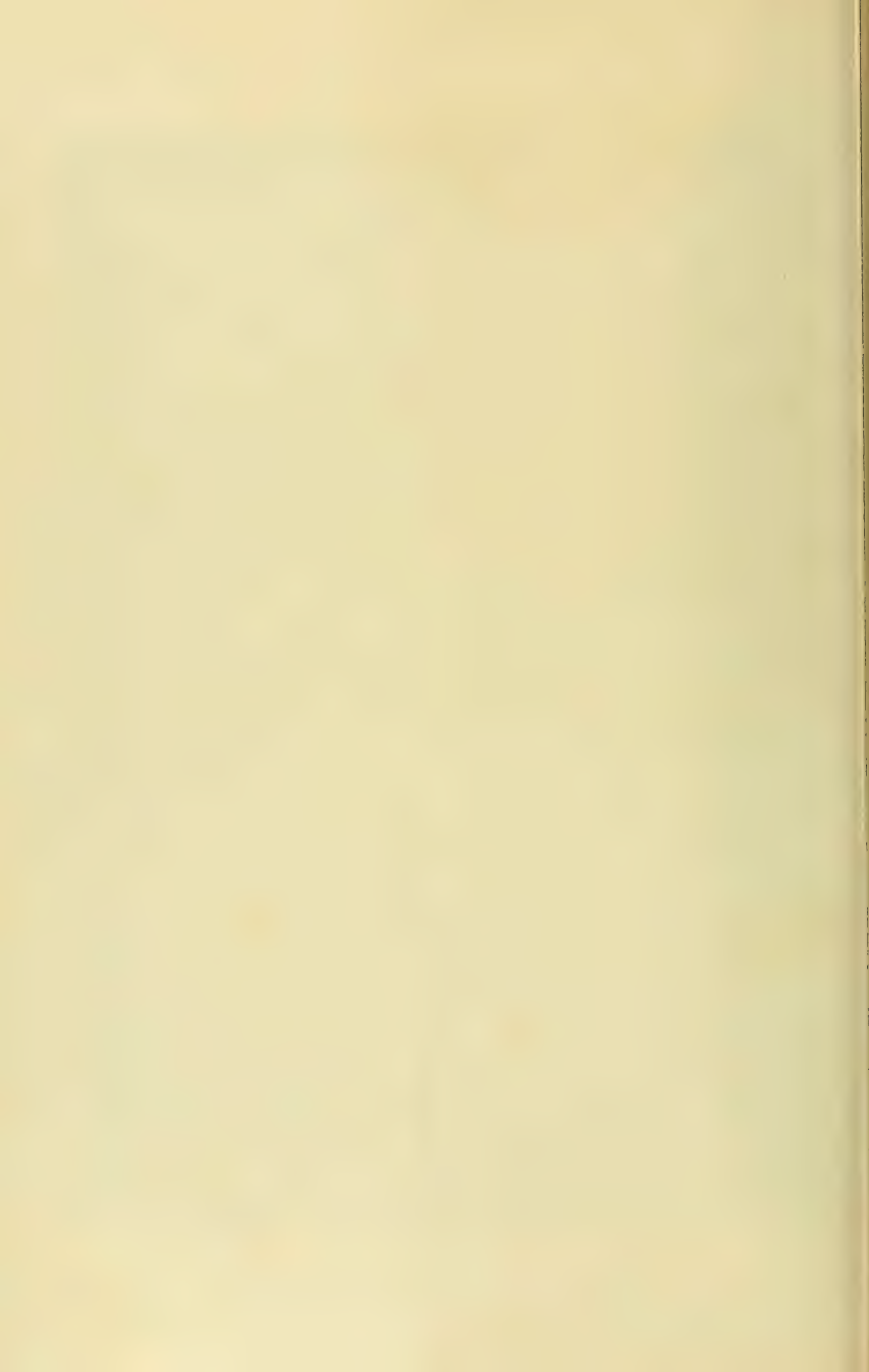


LATE AFTERNOON
by IDA W. PALACHE
SAN FRANCISCO



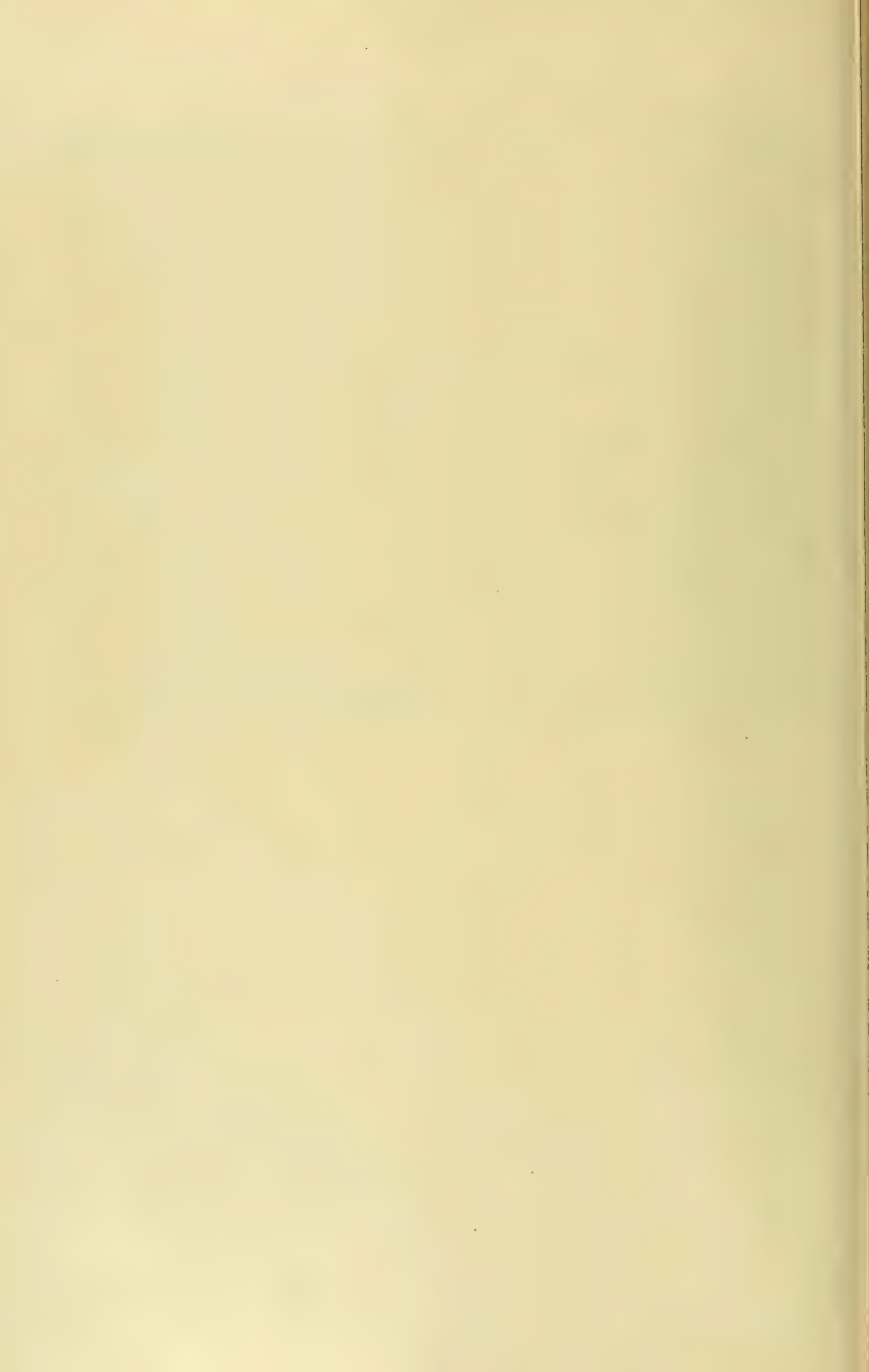


A DUTCH FISHING BOAT
by W. E. DASSONVILLE
SAN FRANCISCO



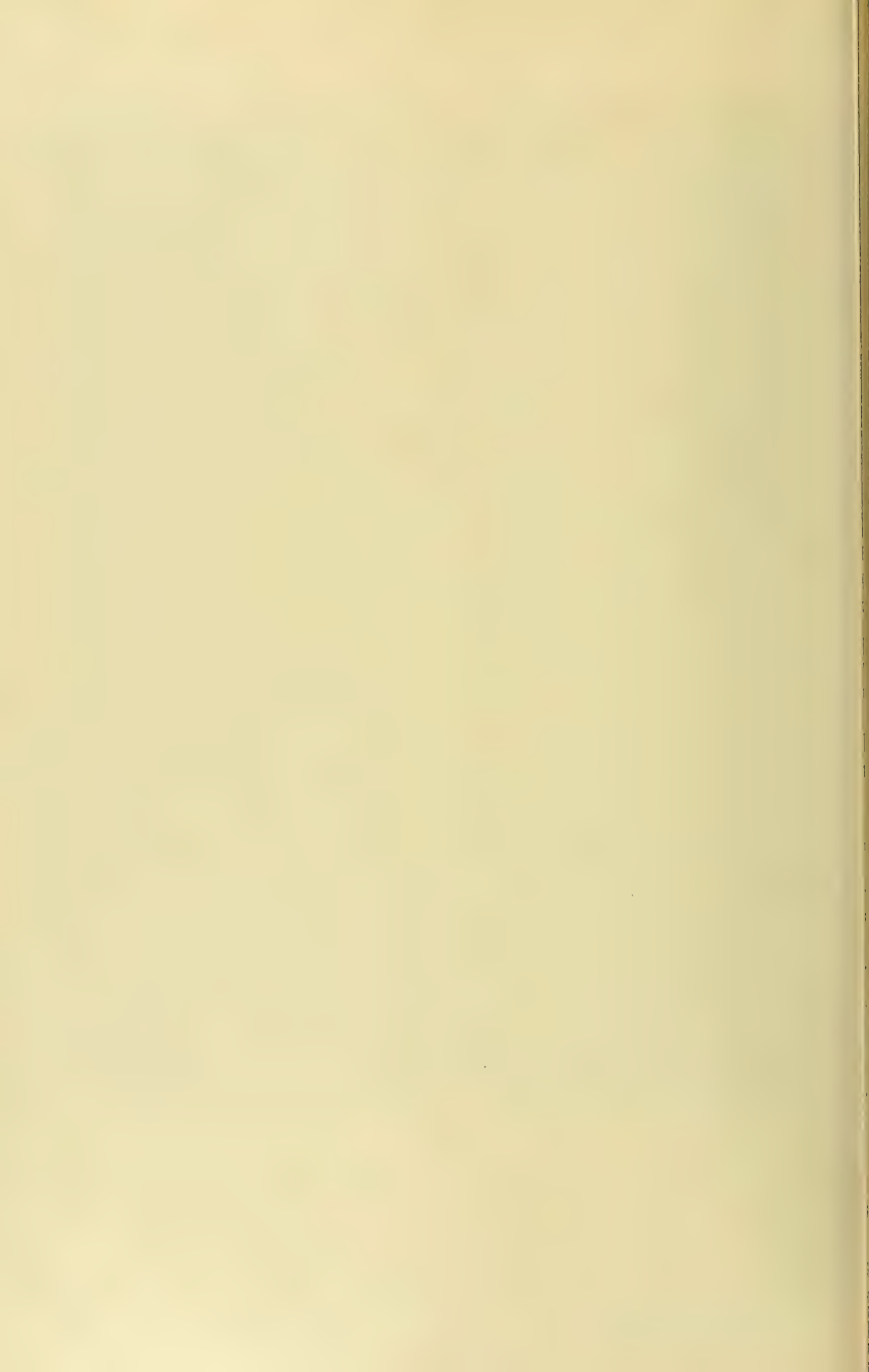


ACROSS THE DUNES
by HELLEN PLUMMER GATCH
SALEM, OR.



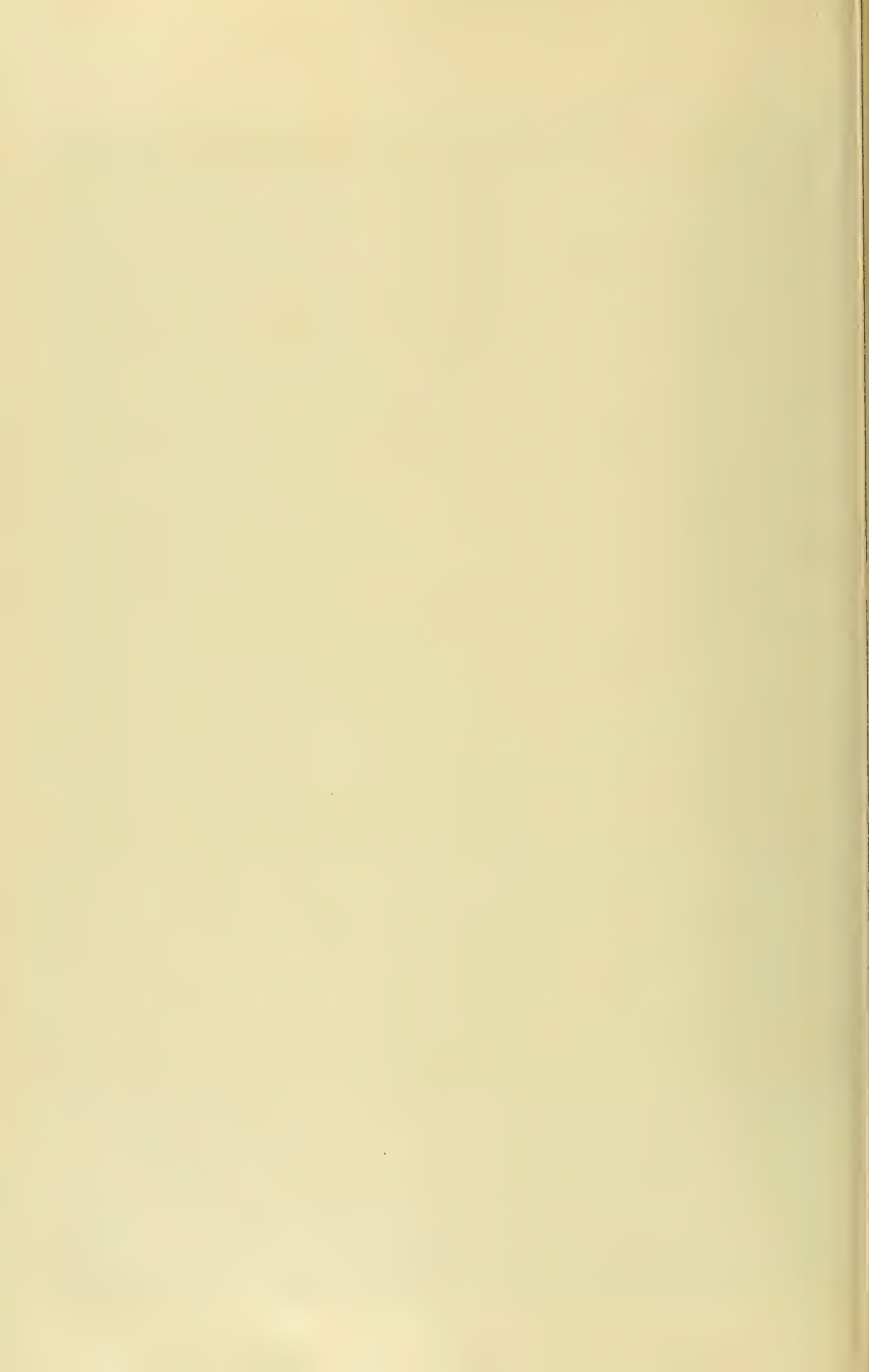


PORTRAIT OF SARAH WHITNEY
by LAURA M. ADAMS
SAN FRANCISCO





HEIMROCH
by MYRA ALBERT WIGGINS
SALEM, OR.





LOW WATER
by R. B. LAMSON
PORTLAND, OR.



TREE STUDY
by W. J. STREET
SAN FRANCISCO

A FEW WORDS OF CRITICISM UPON THE WORK OF EACH EXHIBITOR, LEVELED IN A KINDLY SPIRIT BY THE EDITOR, WITH REPRODUCTIONS OF STRIKING PICTURES.

ADAMS, LAURA M., San Francisco. The charming portraits of this worker have always been attractive to San Franciscans, and this year the pictures accepted from her form one of the strongest series of portraits in the exhibition. Indeed, the portrait of Miss Henschel, which was reproduced in the May, 1901, CAMERA CRAFT as the frontispiece, is the strongest and most charming portrait on the walls. The portrait of Sarah Whitney, reproduced in this number, is also a strong example of her work. But one example of decorative work, in which Miss Adams attracted attention last year, is shown by her in this exhibition. It is entitled "The April Baby," and is also reproduced.

ACKERMAN, C. E., San Francisco. Three prints, "A Neglected Lesson," "Portrait of Miss L." and "Hesitation" form Mr. Ackerman's contribution.

ALLEN, E. M., New York, N. Y. A number of landscapes in varied tints of blue strike one as being out of tone. The color of the prints does not seem to harmonize either with the mats or the subjects. "And Eve's One Star" is, perhaps, the best in the lot.

ASH, O. M., Portland, Or. "Her Last Mooring" is the title of a pleasing green carbon that leaves but little to be wished for.



A DUET

BY I. P. HODGINS, TORONTO



WOMAN AND CHILD

BY DR. BRUGUIERE, SAN FRANCISCO

of a small sketch, fascinating because of its clear, foreign atmosphere.

BOURKE, EDWARD LATELLE, Chicago, Ill. All of the works submitted by this contributor possess interest. Mr. Bourke has been particularly fortunate in his street scenes, one of which is reproduced in this number. "A Gray Day in Town" is particularly worthy of mention for its tonality.

BRIGMAN, ANNIE W., Oakland, Cal. Of the five prints on the wall the most interesting is the "Portrait of Mr. Morrow," which is one of the best portraits in the exhibition.

BROGDEN, T. F., England. The limitations of Photography were never more clearly demonstrated than in "The Fish Market," a group of figures in perfect drawing, well lighted and full of life but made absolutely uninteresting by a wealth of superfluous detail. The photographer simply saw his opportunity and accepted it without risking time in changing his setting. A typical, sign-covered London 'bus in the foreground of "A Snow Storm" lends interest and perspective to the picture but saps all pictorial merit from the print. It is simply a good picture of snow "caught on the wing."

BROWN, MAURICE W., M.D., Alameda, Cal. The single print by this contributor is called "The Marsh Road," and is a striking example of difficulties

BANGS, F. C., San Francisco. Two fine lion pictures form Mr. Bangs' contribution this year. The high-lights in both are a little chalky but not sufficiently so to cause serious criticism.

BEEBE, W. B., Portland, Or. The three sepia prints by this contributor possess ordinary interest, the portrait entitled "The Morning Paper" being the best of the three.

BIGGERSTAFF, E. H., San Francisco. "Haven of Repose," the only picture exhibited, is a delicate bit of land and water, striking because of its simplicity.

BLAINE, E. M., Chicago, Ill. All the pictures shown by Mr. Blaine have been seen and reviewed in the Chicago and Philadelphia salons. Of the two exhibited, "In Sunny May" is the stronger, carrying out the sentiment of the title fully.

BOON, E., Italy. "The Venetian Byway" is the title

overcome. Two figures are silhouetted against the horizon and lend interest to the picture, which, all in all, strikes one as being particularly good.

BRUGUIERE, DR., San Francisco. The nine pictures in this worker's series are all full of good, healthy sentiment and will attract attention. The picture, "Woman and Child," reproduced is a skilful arrangement and, being printed in a warm-toned platinum, appeals strongly.

BRUNNER, MISS LOUISE, San Francisco. "Meditation," the only picture submitted by this contributor, is a fairly good one, but somewhat scattered in interest.

BULL, C. GEORGE, M.D., Alameda, Cal. "An Early Snowstorm in the Sierras" is an interesting subject, the effect of which is somewhat marred by being printed on royal bromide. If it had been printed in black and white it would have been one of the striking pictures of the exhibition. Several other snow studies are full of merit, but the remaining pictures by the same worker are commonplace.

CABOT, MRS. ELISE, Boston, Mass. "Study of a Child" is well done.

CARROLL, J. M., San Francisco. The sketchy picture entitled "The Dunes" is admirably handled and full of atmosphere. Careful framing assists considerably in the value of the picture. "'Tixt Land and Sea" loses because of a discordant note in the frame. Otherwise, it is a dainty little print, full of suggestiveness.

CHAPMAN, I. H., Philadelphia, Pa. Three magnificent frames comprise Mr. Chapman's contribution, all of them being full of human interest and showing extreme care in choice of subject and manipulation of print. "La Siesta," reproduced, is, perhaps, the strongest of the three, but it would be hard for an impartial observer to select the most attractive.

CHILSON, MRS. M. P., San Francisco. "On the Water Front" is a decorative panel, rather well handled.

CLUTE, WALTER M., Chicago, Ill. "Silver Morn" is a study of somewhat decorative effect. "The Portrait Arrangement," reproduced in



MOUNTAIN ROAD

BY W. W. REED, SAN FRANCISCO



A DREAM OF FAIRYLAND

BY DR. F. DETLEFSEN, CHICAGO

this number, shows much better thought and is splendid in arrangement.

COBURN, ALVIN LANGDON, Boston, Mass. "Riverside" is a weird miscellany of man, trees and water, and has but little excuse for being.

COHEN, EDGAR A., Alameda, Cal. All of the four prints submitted by Mr. Cohen appear to be too black and white and are rather staring. The best of the four is entitled "A New Picture Book," and is well posed.

COLLINS, MISS ESSIE, Columbus, Ohio. Several delightful pictures, one of which, "Madonna," is reproduced, give us a better idea of Miss Collins' work than we have ever had before. The softness and delicacy of the prints, the modeling and skilful handling of the subjects, place Miss Collins in the front rank of the portrait workers represented in the exhibition.

COOMBS, A. L., San Francisco. "Japanese Venice" is an interesting Japanese study of good composition and rich in atmosphere. Still finer in the latter respect, and in every way a remarkable picture, is his "Gray Day in Japan." A rich gum print, entitled "A Mountain Village in Japan," is interesting from an ethnological standpoint. "Sheep at Nightfall" is rich in color, skilfully handled and extremely attractive.

CROSS, A. D., San Francisco. "Outward Bound," reproduced in the April, 1901, CAMERA CRAFT, is the only picture submitted by Mr. Cross. It is a striking marine.

CROWELL, MRS. A. NELSON, San Francisco. "Ah Sue" is a well-lighted and interesting study of a Chinese child. The picture entitled "Iris" is an example of the decorative effect she strives for in her flower studies.

CROWELL, F. S., Chicago, Ill. "Yacht Cadilac," which was reproduced

in the October CAMERA CRAFT, is full of life and action. The portrait by this worker is fairly good as to technique, but is badly placed.

DAY, F. HOLLAND, Boston, Mass. The work of this master hand is not fully up to expectations, "The Nubian," which is reproduced in this number, being the only really strong thing in the series.

DASSONVILLE, W. E., San Francisco. This worker has presented fourteen prints, most of them in platinum, which show a vast improvement over his work of last year. There is a clearer note in his pictures, and several portraits, notably the one of Charles Dickman, are full of strength. Two pictures from the series are reproduced in this number.

DAVIE, MISS HELEN L., Los Angeles, Cal. "It's Up to You," is the title of a well-posed picture in which four youths of an innocent age are engaged in the pleasing pastime called "seven-up." The print should be trimmed, however, closer on the left, as several articles in this portion of the picture detract from the central object.

DEANE, LOUIS C., San Francisco. Two coast scenes form this worker's contribution. Both of the pictures are careful as to composition and are full of atmosphere.

DERBY, CARL W., Riverside, Cal. "The Letter" is a plain, simple treatment, rather strongly lighted, of a mother and son reading, and is quite good.

DETLEFSEN, DR. F., Chicago, Ill. This well-known worker in platinum exhibits six small prints characteristic of his thorough understanding of his medium and well calculated to inspire the black and white workers with a love for their paper. The delicacy and charm of "A Dream of Fairyland" will be readily understood through the accompanying reproduction.



IN THE BLIZZARD

BY WM. F. JAMES, CHICAGO

DEVENS, MAY, Boston, Mass. The one print by this worker, entitled "Lithgon," is of considerable merit.

DE WITZ, CHARLES E., Chicago, Ill. "The Old Home Across the Sea," a corner of a stone dwelling, with charming lighting effects, and strongly reminiscent of German country life, is spoiled by inappropriate framing.

DISERENS, IDA B., San Francisco. The "Portrait of G. W." is full of childish grace.

DOLMAN, JOHN, Philadelphia, Pa. A picture of high qualities, and the only one submitted by Mr. Dolman, is reproduced in this issue. It is called "Poverty" and is a picture with great strength of manner as well as earnestness of sentiment. The figure is in splendid drawing and there is a unity of expression that gives to this print a clear position as one of the leading genre pictures on the wall.

DUMAS, MRS. ALICE, England. Two fine landscapes, "The Winter Is Past" and "Shadows" will arouse the critical appreciation of the "old school" workers.

EISEN, DR. E. G., San Francisco. Bad framing somewhat mars a good thing in "Homeward Bound," a picture that would have been helped considerably by care in its treatment. "Abandoned" is a picture of a dilapidated cart along a neglected hedge, and is pleasing because of its softness.

EISEN, DR. GUSTAVE, San Francisco. "Dr. Karl Krone: Portrait," is a good, strong picture, full of life and well modeled.

EMERSON, W. OTTO, Haywards, Cal. Were it not for the monstrosity which serves as a frame for the print, "In Holy Sanctuaries I Hear the Angel Voices," it would possess some interest. As it is, it is hopeless. The other two pictures are in the same class, being framed in an almost impossible manner.

EUGENE, FRANK, New York, N. Y. For the first time we are permitted to view the work of the celebrated New Yorker, he having submitted twenty-one prints for our consideration. The originality of the treatment in many of the prints makes them extremely attractive, while in others it is displeasing. His method of matting is more original than beautiful, being, for the most part, composed of parchment paper of a cream tint. "The Unhelmeted Knight" is one of the strongest pictures on the wall, and is familiar to us through reproductions in Eastern publications. One of the most charming prints of the series is reproduced in this number. "Psyche" is an unusually successful nude study, charming in composition and expression. "Sir Henry Irving" is a striking portrait, which, to those who are acquainted with him in repose, is strongly reminiscent of one of his characteristic attitudes.

FIELD, J. H., Berlin, Wis. The work of this photographer has always been attractive because of its individuality, and his work this year is fully up to the standard. "October" and "Gray Day" are the best of his series of five prints.

FIFE, MRS. GEORGE S., San Francisco, shows a rather commonplace portrait.

FROHMAN, F., San Francisco. "The Clock Tower, Unterseen, Switzerland," is a well-selected view of a building made famous by continental painters. It is low in tone and rather striking.

FROHMAN, ISAAC, San Francisco. "Off Long Bridge" is a flat and

uninteresting picture, the composition of which is stilted and the treatment crude. It is, however, well matted and neatly framed.

FRANKLIN, MILTON, M. D., New York, N. Y. The most striking thing in the series of three prints contributed by this worker is a fierce green gum entitled "Willows." In its fuzziness it should appeal to the sympathetic, and its Paris-green color holds the attention for a moment. A sepia gum entitled "The Styx" is full of quiet charm. The other print, "River Path," is ordinary.

FURMAN, R. H. San Francisco. Mr. Furman is represented by two faithful portraits of which the "Portrait of Mr. Stirling" is the better. Both are in brown carbon and satisfactory as to values.

GALLOWAY, MARTHA S., San Francisco. Two portraits, of which the whole-face one is more striking for expression and excellent values, form this photographer's contribution.

GANS, L. S., Philadelphia, Pa. "Mid Fog and Ice" has been made familiar to us through the pages of the Philadelphia Salon catalogue, in which it was reproduced. It is full of sentiment and appeals strongly to the imagination. The print could, however, have well spared several inches off the left, which would have thrown the center of interest in a more pleasing position.

GATCH, HELEN PLUMMER, Salem, Or. "Driftwood" and "Across the Dunes" are full of interest. The latter, which is reproduced, is perfect in composition and tone.

GAVIN, A., Portland, Or. "Evening Glow" is a small print in red, surrounded by a heavy board frame that does much to lend interest to a rather prosaic subject.

GENTHE, ARNOLD, San Francisco. The "Portrait of Miss Anglin" is an interesting example of the style with which Mr. Genthe has made us familiar. Very much more interesting and a better pictorial sketch is his "Portrait of Master L. S." The most effective of all, both in composition and dramatic force, is his "Ophelia Study." "A Challenge" is the title of the most pleasing of the series and is reproduced. "Study for a Poster" is striking but will not appeal to the collectors. A sharp, clean-cut picture is entitled "Profile Study." The rest of the series is in Mr. Genthe's accustomed style and, as a whole, compares favorably with his collection last year, which won the CAMERA CRAFT gold medal.

GOE, CHARLES A., San Francisco. The best of the series of four prints from this worker is a portrait in profile. It is well lighted and tastefully trimmed and mounted.

GOETTLING, A. E., Cincinnati, Ohio. "The American Sphinx" is an ordinary portrait surrounded by a number of inches of green frame. It is not attractive.

GOLDSMITH, HUGO B., San Francisco. "The Duck Seller" is one of the few Chinatown pictures accepted this year and is full of strength.

GOLDSMITH, MILTON P., San Francisco. "The Salesman of Fish Alley" is the high-sounding title of what might more appropriately be called a "Chinese Medley."

HABENICHT, GEORGE, San Francisco. This well-known professional worker is represented by a single portrait of an old man done in a bold and



THE APRIL BABY
by LAURA M. ADAMS
SAN FRANCISCO

straightforward manner which leaves but little opportunity for criticism.

HANSEN, O. H., San Francisco. "Alameda Marshes" is charmingly arranged and well handled in printing.

HODGINS, I. P., Toronto. "The Solitary Reaper" is a picture of singular fascination. The impression of vast and silent solitariness is most convincingly suggested. A lone figure silhouetted against a simple evening sky and relieved by a single touch of light forms the center of interest which, even if removed, would still leave a picture deep in sentiment. "A Duet," totally different in subject and construction, is reproduced in this number.

HUBLEY, GRACE, Colfax, Cal. "A March Day in California" is a sheep study of excellent composition and good tonality. "When Does Our Turn Come?" by the same photographer, is one of the most spirited genre pictures on the wall.

JAMES, JAMES, San Francisco. "A Misty Morning" breathes the *plein air* and the freshness of the country.

JAMES, W. F., Chicago, Ill. "Evening" is a clever little landscape that will attract much attention because of its clear tone and admirable choice of position. "In the Blizzard," reproduced in this number, is also by this clever worker.

KAISER, L. M., San Francisco. A very impressive print is Mr. Kaiser's "On Tamalpais," serious in feeling and full of quiet mystery.

KEMP, E. H., San Francisco. "Unloading the Hay Barge" and "The Degenerate," two of the four prints by this worker, were reproduced in CAMERA CRAFT of last year, pages 8 and 77 of Vol. IV. Another picture, "The Italian Street Dancers," is reproduced herewith and is one of the striking things on the wall. The picture entitled "Moonlight" is printed in a vivid blue, making it decidedly weird and striking, but of little pictorial value.

KOBBE, HERMAN, Fort Mason. "Billy" is a good character study of a sturdy young man in a sweater and with pipe in good position.

LADD, S. H., Portland, Or. Five prints in carbon, neatly framed and full of interest, are submitted by this worker. The best of the four is reproduced in this number, and is entitled "Eyes of the Earth."

LA FRAY, H. B., Toronto. Original in treatment and skilfully executed is Mr. La Fray's "The Smoky City," a picture of excellent tones and fine in atmosphere.

LAMSON, R. B., Portland, Or. "A Stormy Sea" is a good marine picture, full of life and admirably framed. "Morning Mists," also by Mr. Lamson, is reproduced.

LANE, MR., Chicago. "Evening" is rather a commonplace rendering of the accepted idea expressed in the title.

LANGE, O. V., Berkeley, Cal. This celebrated flower worker is represented by four new prints, which are characterized by the same feeling and expression found in all of his work. The most striking of the four, "Roses," is reproduced.

LASSEN, H. C., San Francisco, contributed a portrait well modeled and admirably posed. The discordant note in the frame, however, detracts somewhat from the ensemble.

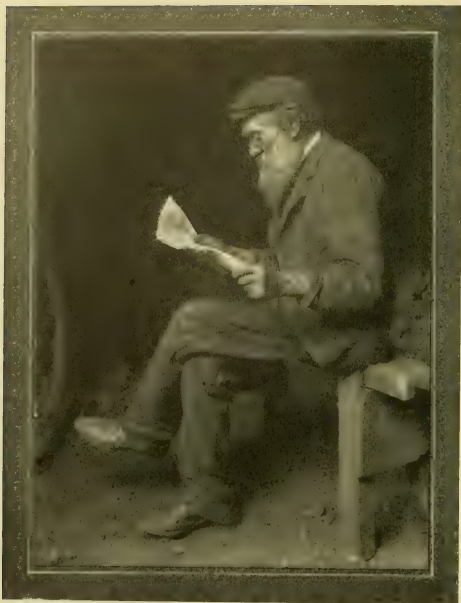
LEAT, H. C., England. "The Whistler" is a vigorous print of a small



A PORTRAIT ARRANGEMENT
BY WALTER MARSHALL CLUTE
CHICAGO



CINTRA
by DR. H. D'ARCY POWER
SAN FRANCISCO



DURING THE DINNER HOUR

BY T. F. BROGDEN, ENGLAND

England. The soft and beautiful distance in "The Shambles—York" makes this print of peculiar interest. It is a narrow, upright panel showing, with excellent drawing, the architecture and quaint street of the old English town. Three of the best architectural studies on the walls are also by this worker.

LYONS, MRS. K. G., San Francisco. "A Ray of Light" is a pretty study of cloud and sea. A Marin County landscape, by the same photographer, is characteristic of the scenery of this coast.

MACDOWELL, C. H., Chicago, Ill. Full of interest and quiet charm is "Early Evening," even though the heavy mass of trees in the center detracts from the whole. "Homeward Bound" is a dainty sheep study, showing an old homestead in the background, and is faultless as to composition.

MANLEY, W. L., Yokohama. "Forest Monarchs" is a scene in the woods which, for color values and carefully expressed perspective, is above criticism. "A Japanese Mountain Village" is interesting for its sincerity.

McFARLAND, A. G., San Francisco. An excellent lion study forms the object of interest in Mr. McFarland's contribution. It is entitled "Victoria and Leonine."

MARKS, FRANK E., Camden, N. J. "Ending of the Day of Toil" is beautifully handled and is really a little gem. Its suggestiveness leaves a pleasant memory.

MAUK, DR. E. H., San Francisco. "Spirit of Loneliness," though not beautiful in composition, well bears out its title and is excellent in atmospheric effect, much resembling an unfinished sketch.

MAURER, OSCAR, San Francisco. The most interesting series of pictures

boy with pursed lips and smiling eyes, charming in sentiment and with an expression so lifelike that one feels like joining in the tune. It is reproduced in this number. The other four prints possess considerable value.

LE BRETON, A. J., San Francisco. "Morn" and "The Pool" are the titles of two small but piquant prints.

LEE, FRANCIS W., Boston, Mass. "Billie," the best of the pictures in this series, attracted much comment at Philadelphia, and is a strong bit of work. The other pictures on the wall are strong portraits, pleasing because of their simplicity. The picture of "Friar Huntington" loses much because of its flatness.

LOUGHTON, ALFRED,

on the wall, the delightful softness in all the prints proclaiming the skilful touch of the master hand. Three pictures of this series are reproduced in this number.

MEEKER, GEORGE C., San Jose, Cal. "A Day in Spring" is decidedly the best picture submitted by Mr. Meeker this year, closely followed by "Evening on the Guadalupe" and "When the Hours of Day Are Numbered."

MONTEVERDE, F. E., San Francisco. Four prints have been accepted from this contributor, two of which, "The March Wind" and "Fruit Study," have been reproduced in the May and October CAMERA CRAFT of last year. The other print, "Before the Bath," is a charming bit of figure work, pitched in a low tone, but telling its story well and with delicacy.

OYSTER, E. T., Chicago. Why the print entitled "Morphia" ever came to be hung will, in all probability, be an unsolved problem. It is a banal suggestion weakly handled.

PALACHE, IDA W., San Francisco. "Late Afternoon," a strong bay study, which is reproduced, forms the center of interest in Miss Palache's exhibit, which comprises a number of splendid things. "Ramona's Pool" and "Sunset on the Pacific" are especially to be admired. "Through the Oaks" is full of strength and vigor, but the shadows are too intense.

PALITZ, J. MAX, Milwaukee, Wis. "At Break of Day" is an unusual treatment of a subject often tried, and Mr. Palitz has, indeed, tried hard to convey his conception of the hour, but there is a note lacking somewhere which renders the picture somewhat unsatisfactory.

PARKER, H. B., La Grange, Ill. "The Pines of Annisquan" is reproduced in this number and is decidedly the best of the three prints accepted from this series.

PETZOLD, ADOLPH, Philadelphia, Pa. Two well-framed ozotype prints, "Rewarded" and "Landscape," are attractively treated.

PIATT, W. J., San Francisco. Six prints form Mr. Piatt's contribution to this year's exhibition. The charm and humor of the print of "And Bill Saw the Joke" (reproduced) is almost irresistible and will prove one of the popular



AFTER THE STORM

BY WILL H. WALKER, PORTLAND

pictures of the show. "A Tangled Skein" is also full of interest, being a picture of an old net maker, in a low tone and absorbing in its interest. "In Old Zacatecas" is one of the best bits of architectural work submitted. Several sheep studies are also pleasing.

POEHLMAN, H. E., San Francisco. Mr. Poehlman exhibits one picture, entitled "Lost on the Beach," which is well placed and strongly suggestive.

POWER, DR. H. D'ARCY, San Francisco. Dr. Power exhibits three of his well-chosen portrait studies in gum. All of them show a lightness of touch, an appreciation of the medium, characteristic of Dr. Power's work. One of these pictures, "Cintra," is reproduced in this number. Two delicate landscapes in carbon and a large gum, entitled "Forest Home," complete the series.

POWER, GEORGE T., Chicago, Ill. "November Landscape" is rather scattered as to interest.

PROCTOR, E. T., Wheeling, W. Va. Mr. Proctor sends but one portrait, that of a beautiful girl, remarkable for freshness and graceful elegance.

REA, L. E., San Francisco. But two pictures were submitted by Mr. Rea this year, the most interesting of which is a portrait of Mr. Johnston in sepia carbon.

REED, W. W., San Francisco. Mr. Reed's only print, "Mountain Road," is characteristic in its atmosphere and reminiscent of the hill country.

ROBINSON, GEORGE V., San Francisco. "In Quiet Waters" and "Dusk on the Alameda Marshes" are the titles of two charming pictures that hold the interest after the curiosity is satisfied.

RUSSELL, MRS. WM. E., Cambridge, Mass. Of the things sent in by Mrs. Russell only one is worthy of mention, and this one, because of its charming atmosphere and rendering of color, is reproduced in this number.

RYAN, S. B., San Francisco. The only print contributed by Mr. Ryan is entitled "The Hay Market," and is rather an original treatment of a waterfront scene.

SCHEER, GEORGE H., Madison, Wis. "The First Snow" is well rendered, and "A Day in February" is calculated to awaken memories.

SCOTT, WALTER A., San Francisco. Of the nineteen prints on the wall the strongest is, undoubtedly, "Tangled Meshes," which attracted much attention at the Chicago Salon. "A Nevada Landscape" is another strong thing, if a second is to be selected from this, one of the most interesting collections on the wall.

SCOTT, MRS. WALTER A., San Francisco. "Moss Beach" is a simple marine, well interpreting the spirit of the seashore.

SCHULER, JOHN W., Akron, Ohio. One of the best still-life pictures on exhibition is the "Group of Fruit." It is carefully arranged, and the photographer has succeeded in expressing his values in the most interesting manner. "Dot," a picture of a child, freakily mounted, is not so attractive.

SCHULTZE, MRS. H., San Francisco. Of the twelve prints on the wall, the portrait entitled "A Study" is decidedly the most attractive.

SEARS, MRS. SARAH C., Boston, Mass. The two prints from this worker, "Study for a Portrait" and "Child in White," are both rather good. The latter picture is well modeled and its softness appeals strongly.

SMITH, HARRY G., Portland, Or. The sepia print of a ship at anchor, entitled "Drying Sails," forms an interesting picture.



A NUBIAN
by F. HOLLAND DAY
BOSTON, MASS.

SNYDER, FRANK, Chicago, Ill. Through this photographer's works run a note of fine and decided expression, rendering his prints full of interest. "The Gleaner" is full of strength and vigor, and is a good bit of outdoor work.

SNYDER, GEORGE F., Chicago, Ill. "Whispering Willows" is a charming road study, with excellent lighting effects.

STANYAN, JENNIE H., San Francisco. A dainty little oval entitled "Youthful Meditation" makes one wish that this worker had shown more of her productions.

STREET, W. J., San Francisco. This worker, one of the leading contributors of last year, is represented by fourteen pictures, which, in their varied assortment of treatment and subjects, enables one to form a good idea of the worker's versatility. The best of the series is reproduced in this number, the original being full of charming sentiment and atmosphere. A number of marine pictures add interest to the series, but "The Study of a Head" might well have been omitted.

THOMPSON, FRANCIS, San Francisco. A badly chosen frame spoils a good picture in the "Portrait of Mrs. H."

TUM SUDEN, OTTO, San Francisco. The only print submitted by Mr. Tum Suden is a green carbon entitled "A California Road." The picture is characteristic of many California road scenes and is well handled.

WALKER, WILL H., Portland, Or. "After the Storm," in a handsome frame, is pleasing for its simplicity and originality in composition. It is reproduced in this number.

WERNWAG, C. J., Philadelphia, Pa. This series of pictures is spoiled by the introduction of a large frame entitled "Study," toned a muddy yellow.

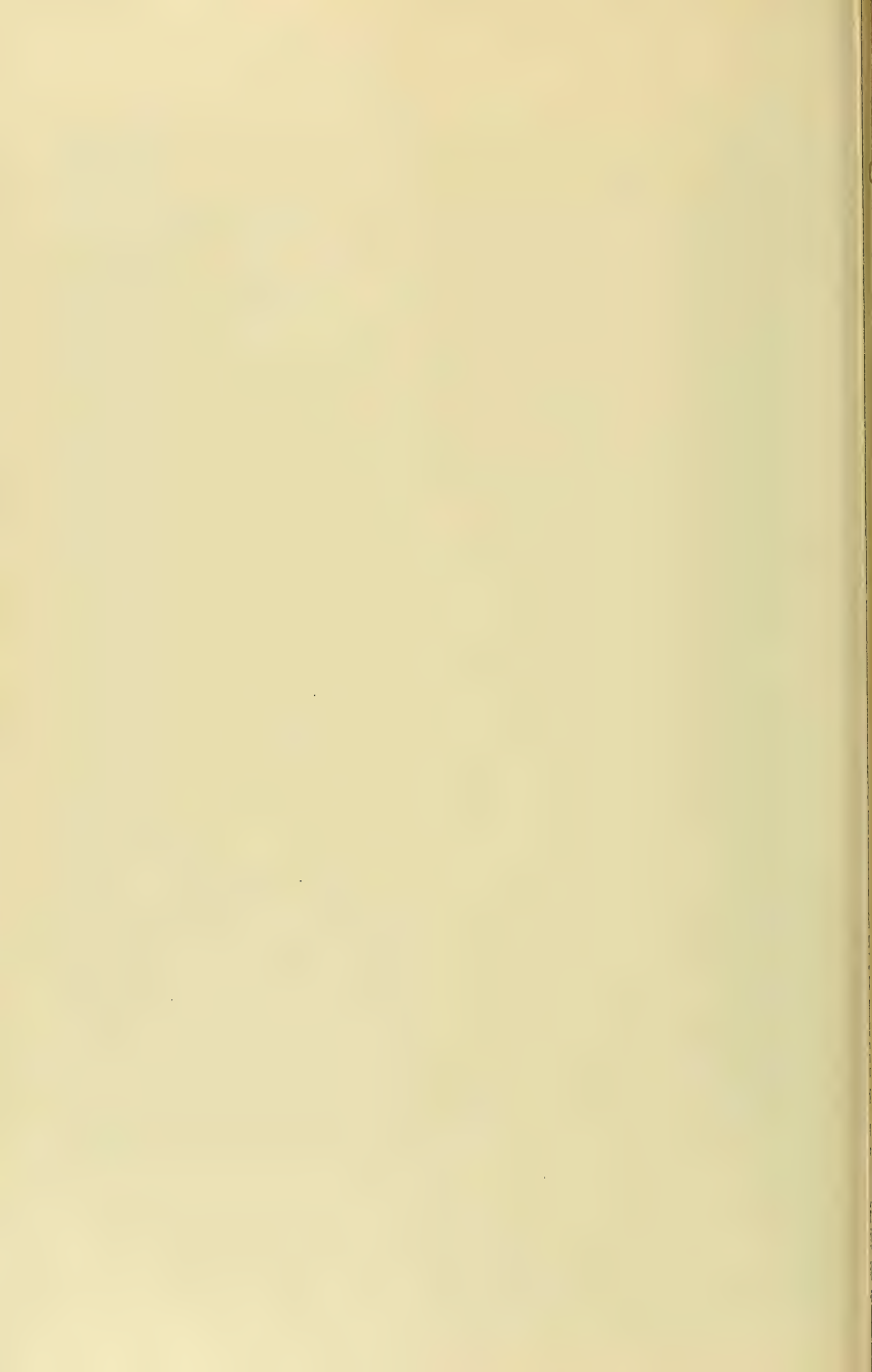


EVENING AT POINT AUR BARILS

BY ROBERT CRAIK MCLEAN, CHICAGO

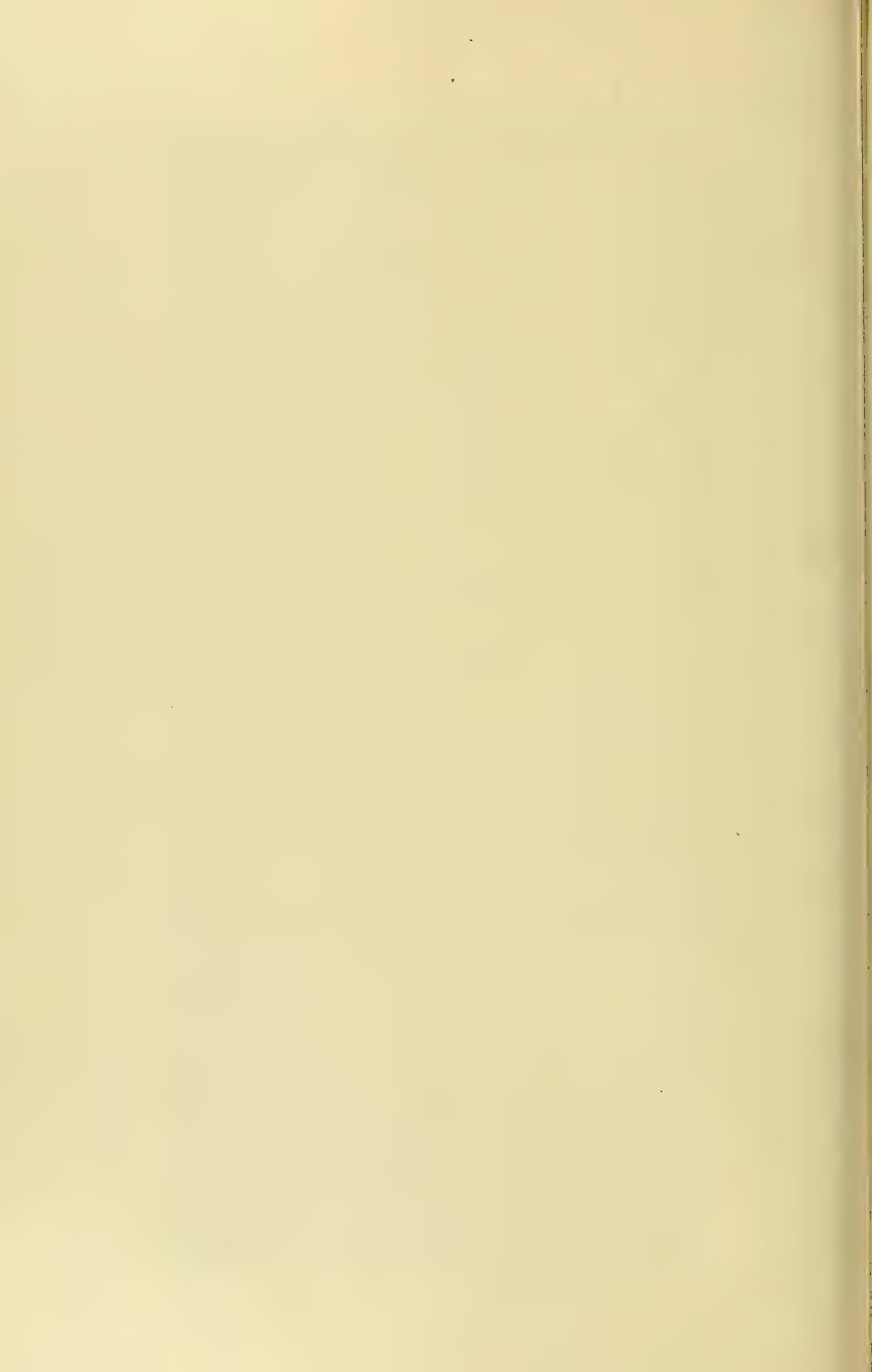


BY THE RIVER
by MRS. WM. E. RUSSELL
CAMBRIDGE, MASS.



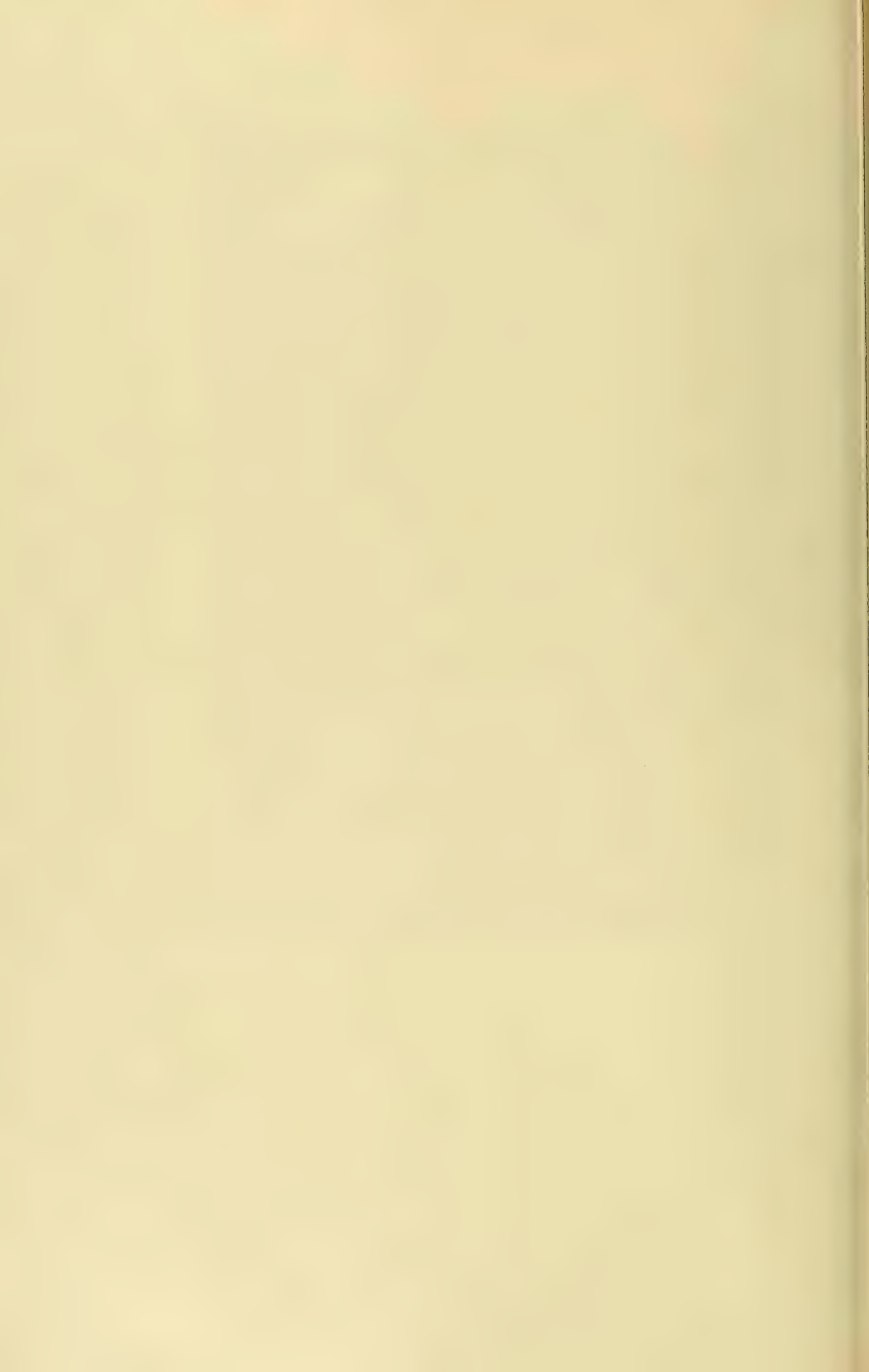


EYES OF THE EARTH
by S. H. LADD
PORTLAND, OR.



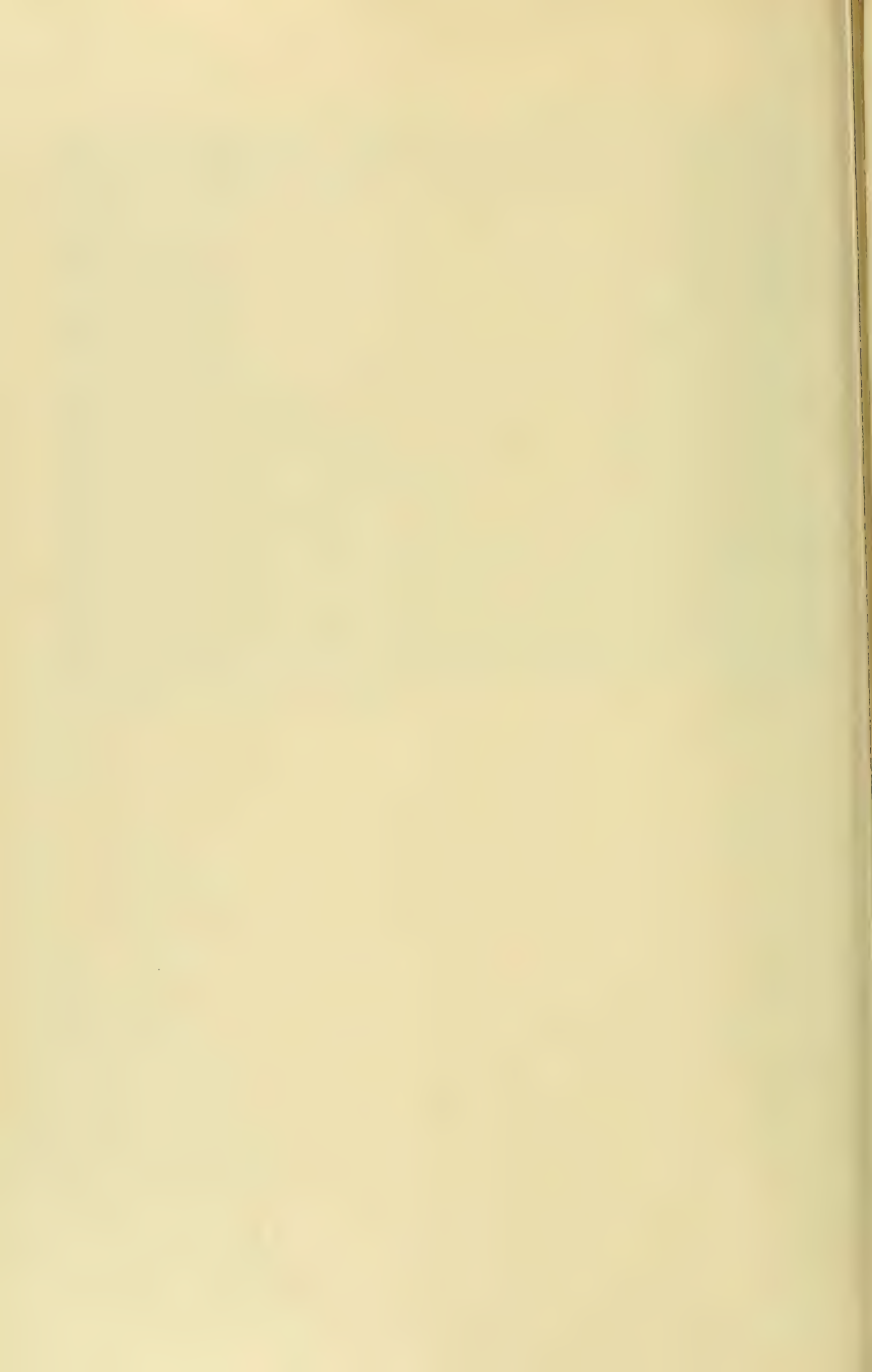


ENTRANCE LITTLE CLOISTER, GLOUCESTER
by H. C. LEAT
BRISTOL, ENGLAND





A PASTORAL STUDY
by OSCAR MAURER
SAN FRANCISCO



Although the position is pleasing and the posing excellent, the yellow color detracts from everything around it and refuses to harmonize with the other work, which is full of delicacy and in a charming tone. The beautiful print entitled "Rembrandt Study" is somewhat marred by the discordant high-lights in the neck and on the shoulder.

WHITE, G. KNIGHT, San Francisco. "At the Wharf" is a strong, sketchy bit of water front that appeals because of its tone and balance. The three other prints on the wall are only fair.

WHITE, LILY E., Portland, Or. "In the Shadow of the Rock" is a well-handled and well-framed picture of an Indian squaw, admirably lighted and full of interest. "A Shadow of the Past" is another Indian picture, exquisite in its softness and very rich in chemical quality. "The Bridge of Hope" is full of interest from a scientific standpoint, and, as the center of interest, shows an almost perfect rainbow. "The Meadow" is a delicate green carbon, pleasing to the eye because of its softness.

WHITSON, WILLIAM L., Chicago, Ill. The best of the three prints from this worker is entitled "The First Snow of the Season," a carefully selected winter landscape. The other two pictures contain too much to be of interest.

WIGGINS, MYRA ALBERT, Salem, Or. Of the seven prints shown by this clever photographer, "Heimweh" (which is reproduced in this number) and "Mother and Child" are the strongest. The former is in her customary style; the latter is, apparently, a departure, but charming, nevertheless. The little study entitled "Roses" is exquisitely rendered and full of mystery.

WILDE, ARTHUR W., Philadelphia, Pa. Of the eight pictures hung only three are of more than passing interest: "Meditation," "Easter Lilies" and "Amongst the Pumpkins." "Waiting for a Bite" narrowly missed being a great picture, the introduction of a second figure spoiling in part the sought-for effect. "Passing Showers" possesses charm undefined yet clear, the discordant note being a darkened sky, the light in the foreground and middle distance proclaiming the presence of more illumination than the sky would indicate.

WILHELM, J. H., San Francisco. "The Shores of the Golden Gate" is a well-composed picture of sea and coast, admirably framed and pitched in a pleasing tone. "At Rest," however, is rather tame.

WOODS, E. L., San Francisco. "Between Showers" is the only attractive print on the wall by this worker, even this being rather stilted as to composition.

WOOLL, CHARLES L., San Francisco. The quaint little picture entitled "Mother Gannons" tells its story well, and forms the only contribution of this photographer.

ZIMMERMAN, WALTER, Chicago, Ill. "The Alarm of Fire," a fierce red picture of an apparently demented man, was sufficiently striking to pass the jury, and therefore will attract much attention from the public. It is doubtful, however, if the cause of artistic photography will be advanced by its admission. All the other prints, except one, are spoiled by bad framing, and the other is mediocre.

FISHER, N., Copenhagen. "Daily News" is admirably posed and would be satisfactory if there had been the slightest bit of modulation shown in the lamp. "Winter's Night" is rather a startling rendition.



AND BILL SAW THE JOKE

BY W. J. PIATT, SAN FRANCISCO

McLEAN, ROBERT CRAIK, Chicago, Ill. Mr. McLean is represented by several characteristic pictures, the most striking, "Evening at Point aur Barils," being reproduced.

TAYLOR, G. V., England. One of the choicest bits of marine work on the walls is the small carbon entitled "In the Tideway." It is a simple picture of a ship on the beach, silhouetted against the sky.

TULIS, T. N., England. "When the Day Is Young" is good.

WALLSGROVE, I. C. H., England. "Spring," "Summer" and "Autumn" are the titles of three flower pictures on platinum, the background being in a dark and unpleasant brown, while the flowers stand out in black and white. The pictures are more startling than pleasing but the idea of the series is good and admirably carried out.

WILSON, Mrs. L., Chicago, Ill. Mrs. Wilson shows three prints of fair merit.



DUTCH WOMEN

BY OSCAR MAURER, SAN FRANCISCO

CAMERA CRAFT

ISSUED MONTHLY BY
THE CAMERA CRAFT PUBLISHING COMPANY
220 SUTTER STREET, SAN FRANCISCO

Entered at the Post Office in San Francisco
as second class mail matter

THE PICTURES AND ARTICLES IN THIS NUMBER ARE FULLY PROTECTED.
COPYRIGHTED, 1902, BY THE CAMERA CRAFT PUBLISHING CO.

L. D. HICKS, Editor
CARL E. ACKERMAN, Managing Editor and Business Manager
Associate Editors
H. D'ARCY POWER, M. D., O. V. LANGE, THEODORE KYTKA

CAMERA CRAFT is indebted to Mr. Archibald J. Treat, chairman of the Committee on Selection and Hanging, for the article entitled "Today and Yesterday," in this issue. Mr. Treat has, in his accustomed entertaining style, discussed the Salon from his standpoint in a manner that pleases as well as instructs.

THE SECOND Art are covered with the choicest work of the photographers of
SALON the world, and an opportunity is now afforded to study the result
of last year's exhibition, the first one held in the West. That
the effect of the first exhibition was decisive and far-reaching was understood
at the close of the Salon, but no one was prepared for the great advance in
pictorial fields now made apparent by an inspection of the work this year.

Necessarily, the exhibitions held upon the Pacific Coast cannot expect to
draw largely from the East. The great distance, transportation charges, and
the tendency of the so-called "acknowledged" leaders in Photography to
refrain from submitting their work to a board of judges militates against any-
thing like a liberal support. The West is, therefore, forced to rely upon itself
in making the Salon attractive and of educational value from year to year,
looking for a further support from that broad-minded class of Eastern photog-
raphers, who recognize in the West an interesting field, full of unknown
possibilities and deserving of consideration.

The second exhibition is essentially a Western Salon. The pictures of
the Westerners, full of vigor and interest, are separate and distinct from those
of the Eastern and foreign photographers. The West has not yet fully learned
the value of careful matting and framing, and much of the work suffers in
consequence, but not enough to affect the originality of the ideas and the man-
ner in which they are expressed.

The West has progressed during the year, benefiting by its mistakes and
gathering inspiration from successes of the past. If the same improvement is
apparent at the Salon of 1903, CAMERA CRAFT will be satisfied that its labor of
love has indeed accomplished much.

Do not forget to support the financial end of the Salon. Assist the Committee on Publicity, which has labored faithfully to produce a catalogue even finer than that of last year, by buying one or more.

THE EDITOR'S MISCELLANY

HOTEL DARKROOMS

Another magnificent hotel has been opened in Los Angeles without first providing for the welfare and convenience of photographers. "The Angelus," a modern hotel in every other sense of the word, opened its doors on January 1st, and, strange to say, everything except a darkroom for the convenience of the photographic traveler had been thought of.

If hotel proprietors knew how the patronage of the traveling amateur was influenced by the line, "Photographic darkrooms," at the bottom of hotel advertisements, they would pay much more attention to the matter.

SAN FRANCISCO CAMERA CLUB

THE SANDELL CRISTOID FILM

Dr. D'Arcy Power recently addressed the club on the subject of "Film *versus* Glass Negatives." He stated that a recent writer had supposedly given a full statement of the case and rendered a verdict in favor of plates. The comparison, however, referred solely to roll films and was thus incomplete. The doctor contended that the paper, celluloid and other film negatives had an immense advantage over glass in the matter of weight, freedom from halation, non-breakability and the power to print from either side, so useful to the carbon worker. Dr. Power exhibited negatives (both landscape and portrait) made on thin Eastman bromide, which were of excellent quality. The exposure had been eight times that required for a medium plate, and the development was carried much further than would be correct for a bromide print. Enlarged negatives were advantageously made in this way. They could be produced by means of a glass transparency, or by making a bromide enlargement of sufficient density, from which a paper negative could be prepared by direct printing. The latter could be on bromide paper, solio or albumen. The last are better without toning, the red tint being quite non-actinic.

Negatives were also shown, made on the new "Rotograph" negative paper. They were thin, showed but little grain, and gave prints of good quality. The paper was of about the same rapidity as a Banner plate. Dr. Power stated that negative paper required

some care in handling, otherwise creases might develop during the washing process, which would show later in printing. Furthermore, it was advised not to oil paper negatives, irregular absorption or evaporation of the oiling medium being of frequent occurrence, and, except in the matter of printing time, there was no compensating advantage. Dr. Power stated that he had tried the Secco films, which was practically the same as a stripping plate, the basis being paper instead of glass. They had not proved satisfactory, inasmuch as, after stripping, a granular texture remained as a result of its previous connection with paper backings. Turning to celluloid films, the speaker stated that during the last few months he had used many dozens of Seed's negative films to his entire satisfaction. They had been used for all kinds of work, technical, pictorial, portraiture, and micro-photography, and in no instance had the results differed from similar work done on Seed's 26 x. It was explained that the manufacture of flat films had undergone improvement; that they were no longer sawed off a celluloid block, and did not exhibit the transverse markings that were formerly so objectionable. Speaking of celluloid in general, it was shown to possess the serious disadvantage of deterioration in consequence of chemical action occurring between it and the silver coating. This latter disability had been entirely overcome by the new Cristoid film manufactured in England. This film consisted of nothing but the silver emulsion, whereof there were two coats, one slow and the other fast. It thus resembled a double-coated non-halation plate, but its total thickness was less than a sheet of note paper. It was the lightest film in existence, still quite tough, easily handled, and without the least tendency to curl, either when wet or dry. If the slow (or glossy) side were turned outward, the film was slow; if the mat surface were so placed, it was about as fast as a Cramer Crown or Seed 27. In either case it was perfectly non-halative. These facts were demonstrated by the negatives exhibited, consisting of a full-length figure, standing eight feet from a window and surrounded by strongly reflecting glass jars and windows.

Two seconds at f. 8 had proven a full exposure, and halation was nowhere present. The speaker then gave a demonstration of the technique of development. This differed in no way from that of a normal plate, except that the film was subjected to a preliminary one-per-cent formaline bath for three minutes, and after washing was spread upon a ferrotype plate to dry. The developer used was pyro-catechin. The film showed no tendency to curl, neither in the holders nor in subsequent procedures. In conclusion, the speaker said that this film had, so far as his experience went, justified the claims made for it, namely:

1. The lightest film made.
2. Perfect non-halation.
3. Two speeds, slow or fast.
4. Exactly the same keeping qualities as plates.
5. Exactly the same photographic qualities as plates.
6. Produces a negative considerably larger than the original size, and this without distortion.

Great interest was taken in the demonstration and a lively desire manifested to obtain some of the Cristoid films for trial.

KODAK PROGRESS COMPETITION

The Eastman Kodak Company has set the amateur photographic world a buzzing by offering a series of prizes, aggregating the sum of \$4000, for photographs. The purpose of the competition is to demonstrate the progress made in the field of artistic photography since the last print competition, held some years ago.

Full details and instructions will be found in the advertisement of the company in this number.

The names of the judges have not been announced as yet, but the assurance is given that the jury will be composed of the best material obtainable. If any of our readers are in doubt as to any of the provisions of the contest, the editor will be pleased to lend his assistance in explaining the details.

KEEPING SENSITIZED CARBON TISSUE

Carbon and gum-bichromate workers should note the introduction by the Autotype Company of a new airtight box, provided with a compartment containing dry calcium chloride, in which sensitized tissue or paper may be stored for months without serious deterioration. The tissue is kept flat between metal plates. This is essential, as the extreme

dryness makes it very brittle. Reports on the character of the tissue after six months' storage have been issued by several of the British journals, and show that its power of printing without loss of sensibility has been retained for that period. This promises a boon to the amateur worker.

THE "ROTOGRAPH" COMPETITION

The West fared well in the recent "Rotograph" competition, the prizes in which have just been awarded. A total of about one thousand prints submitted was divided as follows:

Contact class, 630; Enlargement class, 250; Post cards, 100. The general average was high, especially in the enlargement class. Of the judges, Mr. Falk was unavoidably absent, so that the pictures were judged by the following well-known gentlemen: Mr. E. B. Core, president of the Photographers' Association of America; Mr. F. Dundas Todd, editor of the *Photo-Beacon*; Mr. Alfred Stieglitz, editor of *Camera Notes*, and Mr. John E. Tennant, editor of the *Photo-Miniature* and late editor of *Wilson's Magazine*. The method of judging pursued was as follows: Each class was taken by itself, and those pictures which were not worthy of a full consideration were laid aside. The remaining pictures were then again taken up and marked by each judge separately, on the basis of sixty marks for technique and forty marks for subject. On adding up the figures the following results were obtained, and to these the prizes have been awarded in accordance with the printed circular of the competition:

GRAND PRIZE (\$200)

Oscar Maurer, of San Francisco, Cal.

CONTACT CLASS

First prize, \$75—John Dolman, Philadelphia, Pa.

Second prize, \$25—Wm. G. Littleton, Philadelphia, Pa.

Third prize, \$5—Ralph E. Berger, Reading, Pa.

Fourth prize, \$5—W. J. Smith, Buffalo, N. Y.

Fifth prize, \$5—W. C. Motteram, Philadelphia, Pa.

Sixth prize, \$5—Thos. C. Martindale, Philadelphia, Pa.

Seventh prize, \$5—A. N. Lindenmuth, Allentown, Pa.

Thirty prizes, consisting of one dozen 10 x 12 "Rotograph," were also awarded in this class.



ROSES
by O. V. LANGE
BERKELEY, CAL.

ENLARGEMENT CLASS

First prize, \$75—Oscar Maurer, San Francisco, Cal.

Second prize, \$25—Wm. C. Motteram, Philadelphia, Pa.

Third prize, \$5—Edward Heim, New York, N. Y.

Fourth prize, \$5—A. P. Yates, Syracuse, N. Y.

Fifth prize, \$5—Myra Albert Wiggins, Salem, Or.

Sixth prize, \$5—Wm. C. Motteram, Philadelphia, Pa.

Seventh prize, \$5—Wm. C. Motteram, Philadelphia, Pa.

Thirty prizes, consisting of one dozen 10 x 12 "Rotograph," were also awarded in this class.

POST CARDS.

First prize, \$30—L. W. Brownell, New York, N. Y.

Second prize, \$10—G. Edwin Keller, Buffalo, N. Y.

Third prize, \$5—C. A. Muller, New York, N. Y.

Fourth prize, \$5—James Slack, New Knoxville, Ohio.

Twenty prizes, consisting of one dozen 10 x 12 "Rotograph," were also awarded in this class.

The editor is pleased to acknowledge the receipt of three packages of stereoscopic prints from as many subscribers. While an extended criticism has been forwarded to each of the senders, one significant fact will bear mention here; that is, the fact that all of the photographers used film instruments. A large number of Hawk-eye stereoscopic cameras have been sold on the coast during the past twelve months, and it seems that the cheapening of the instrument for this class of work has greatly increased its popularity.

Through the kindness of the Rochester Optical and Camera Company, Rochester, N. Y., the California Camera Club has been placed in possession of a complete view camera, to be used by those of the members who do not possess a large instrument. The camera will be loaned to individual members upon application.

The gift was a direct result of the San Francisco outing, the attention of Mr. Carleton, formerly president of the company, having been drawn to the success of the expedition by an enthusiastic club member.

Did you receive a *Kodak* for Christmas

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We have fresh films for all sizes
also all other necessary supplies

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PRINTING
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236 Sutter Street, San Francisco

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

220 SUTTER STREET, SAN FRANCISCO

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NOTE:—Subscribers who do not receive CAMERA CRAFT promptly will confer a favor by sending a postal card to this office. The omission will be supplied and an investigation made. The editors will, at all times, be ready to carefully consider manuscript and photographs. When possible, all manuscript should be typewritten.

All photo supply dealers and news dealers are authorized to receipt for subscriptions in our name. Price per year \$1.50; Foreign \$2.00. Back numbers can be obtained direct from the publishers at 15 cents each.

Advertising rates are low and to be had on application. MSS. solicited upon photographic subjects.





A SPRING SHOWER
by K. TAMAMURA

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IV.

SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1902

No. 4

EXAMPLES OF CONTEMPORARY WORK IN JAPAN

The progress of Japan has, for the past few years, been a favorite subject with American writers, and much space has been devoted to descriptions of improved trade conditions and manufacturing interests. That Japan has not been backward in the fields of art is beginning to be realized, and the accompanying photographs by K. Tamamura of Yokohama demonstrate that, in so far as Photography is concerned, the Japanese photographers are well to the front.

Tamamura is the leading photographer in Japan and has an extensive trade with the tourists. The pictures herewith reproduced form part of an exhibition recently held in the art rooms of G. T. Marsh & Co., in San Francisco, and comprise some of the most striking examples of Japanese composition ever seen here. All of the prints contain the essential factors of the Japanese school of art, and while some of the prints bear the ear marks of brush work, otherwise faking, it in no way detracts from the value of the pictures.

Many of the prints exhibited were colored by the famous Japanese water colorist, Shosaku, commonly spoken of as "the long-haired artist of Japan."



ABOVE THE CLOUDS

BY K. TAMAMURA

As a rule, colored photographs are an abomination, but many of the prints in this exhibition were remarkable for their pleasing tone and truth to nature, the colors used by the artist being in no way intrusive.

Mr. Marsh is continually placing before us the finest examples of Japanese art, and deserves the thanks of the San Francisco photographers for this opportunity of studying the pictures of the famous Japanese worker.



GEISHA GIRL

BY K. TAMAMURA



THE PATHWAY
by K. TAMAMURA



DECORATIVE
by K. TAMAMURA



PANELS
YOKOHAMA

REPORT OF THE EXECUTIVE MEETING OF THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA

The Executive Committee of the Photographers' Association of America met in Buffalo, N. Y., January 14, 1902, with all members present.

The first business considered was the reports of Secretary Nussbaumer and Treasurer Barrows, as follows:

SECRETARY'S REPORT

Received for space and advertising.....	\$274 50
Paid to treasurer.....	2274 50
Bills receivable.....	330 00

TREASURER'S REPORT

Cash on hand January 1, 1901.....	\$3106 78
Received for membership and dues.....	2170 00
Received from secretary.....	2274 50
Received from S. L. Stein, balance on entertainment fund, 1900....	147 10
Sale of ladies' buttons.....	48 00
Total.....	\$7746 38
Disbursed by voucher.....	\$3366 84
Leaving balance on hand January 1, 1902.....	\$4379 54

The president appointed H. S. Klein and C. R. Reeves Auditing Committee, who examined the accounts and found same correct.

August 5th, 6th, 7th and 8th selected as dates for the Convention.

It was decided that there would be no prizes offered, but that all exhibits be solicited as complimentary, it being considered that all progressive photographers have a strong interest in the association and will help to make the display of pictures unsurpassed.

It was decided that Wednesday, August 5th, day and evening, be given entirely to the manufacturers and dealers, to be used as they so desire, and that no business session whatever be held on that day.

The following committees were appointed:

Committee on Transportation—J. G. Nussbaumer and C. R. Reeves.

Committee on Badges and Buttons—President Edmondson, J. G. Nussbaumer and H. S. Klein.

Committee on Hotels and Accommodations—President Edmondson, J. G. Nussbaumer and Secretary Reeves.

Committee on Decorations—J. G. Nussbaumer, H. S. Klein and F. R. Barrows.

The secretary was instructed to publish a souvenir and to insert the names and addresses of all the members and associate members of the association, and to mail to each member of the association a copy of the souvenir thirty (30) days before the convention.

The Committee on Hotels reported that arrangements had been made with various hotels for accommodating members of the association at reasonable rates.

The Committee on Decorations submitted an estimate for the entire decoration of the Convention Hall, which was accepted by the board and the contract let for same.

The Executive Committee find that the City Convention Hall of Buffalo, granted by the City of Buffalo, is particularly adapted to the uses of our association and will fill every requirement.

RULES GOVERNING THE EXHIBITION

1. Exhibits may be framed or unframed, at the discretion of the exhibitor.
2. The association will not be responsible for any loss or damage to pictures in its charge, but special precaution will be taken by the Executive Committee to insure the safe return of all exhibits entrusted to its care.
3. Applications for space in the Art Department shall be made to J. G. Nussbaumer, New York.
4. All pictures submitted for exhibition must be addressed to J. G. Nussbaumer, Buffalo, N. Y., first vice-president Photographers' Association of America, City Convention Hall, forwarded at owner's risk, and delivered not later than August 1st, charges prepaid.
5. Exhibits for the Manufacturers' and Dealers' departments to be shipped to C. R. Reeves, Buffalo, N. Y., secretary of Photographers' Association of America, City Convention Hall, charges prepaid, and placed in position by August 5th.
6. Have your box covers screwed instead of nailed. Your home address must be marked on the under side of cover for return of pictures. Association will not be responsible for packages not marked.
7. All boxes and packages will be accepted at any time previous to August 1st, so that photographers need not feel any uncertainty about the safety of their goods. No exhibits will be allowed to be removed from the hall until the close of the convention.
8. No manufacturer or dealer, or their representative, shall do business on the floor of the hall, unless he or they may rent floor space or desk room, and the manufacturer or dealer shall pay \$2.00 for each employe or representative attending the Convention.
9. Employes, to gain admission to the Convention at the employe rate (\$2), must furnish certificate from employer or be endorsed by two active members of the association.
10. Dues shall be paid to F. R. Barrows, 1873 Dorchester Avenue, Boston, Mass. Membership, \$3.00. Annual dues, \$2.00.

C. R. REEVES, Secretary.



THE KONIGSSE

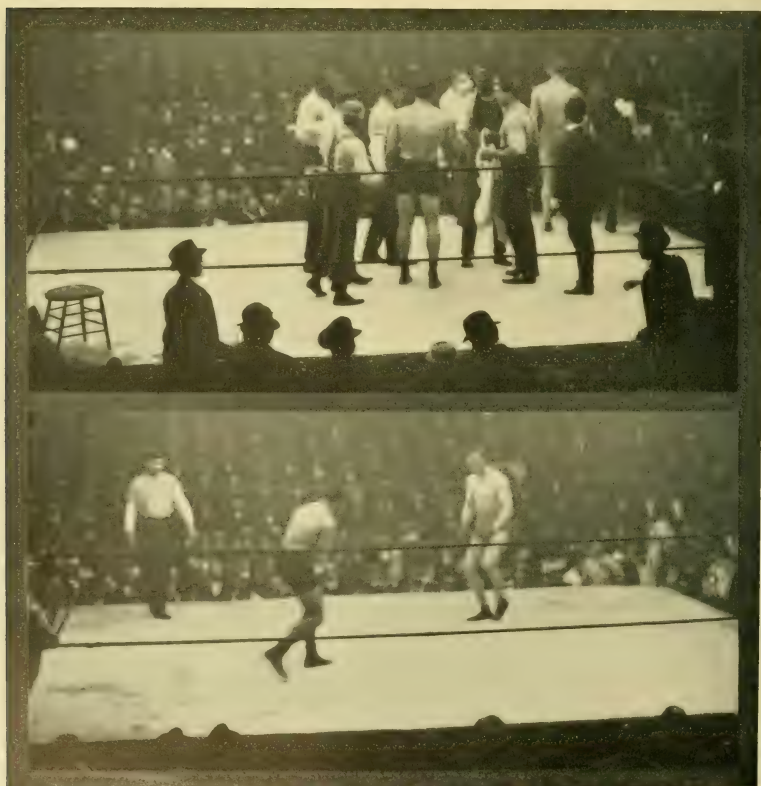
BY R. A. BLACKBURN, C. S. A. P.

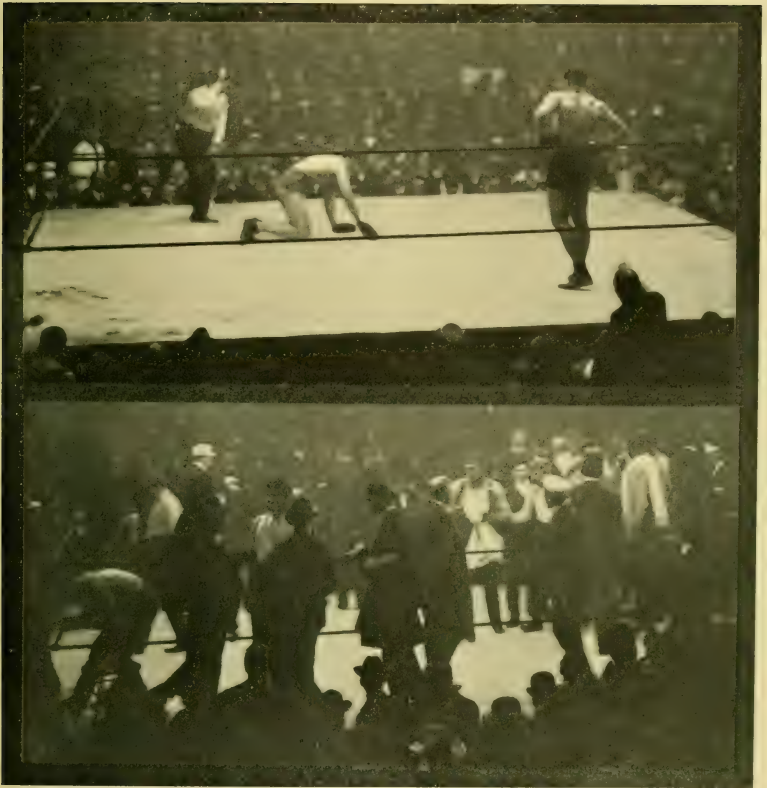
SNAPSHOTS AT A PRIZE FIGHT AT NIGHT

Snapshots with a focal-plane shutter by artificial light would have sounded ridiculous to the old-time photographer, but the accompanying pictures, made during a recent prize-fight in San Francisco, show that it is in no way impossible. By the courtesy of the Edison Company, which made the moving pictures, a member of the CAMERA CRAFT staff was enabled to make several experiments during the progress of the fight.

The ring was lighted by eighty arc lights of four thousand candle power each, suspended from a skeleton frame about twenty feet above the ring. Four spot lights of five thousand candle power each followed the movements of the fighters, thus breaking all shadows. The surface of the ring was covered with clean white canvas, so that all possible advantages in the way of reflections could be gained.

The figures in the four pictures herewith reproduced are exactly the same size as in the original prints. A $6\frac{1}{2} \times 8\frac{1}{2}$ Zeiss-Planar lens was used at full aperture, the exposure being one-twentieth of a second on Cramer Crown plates.





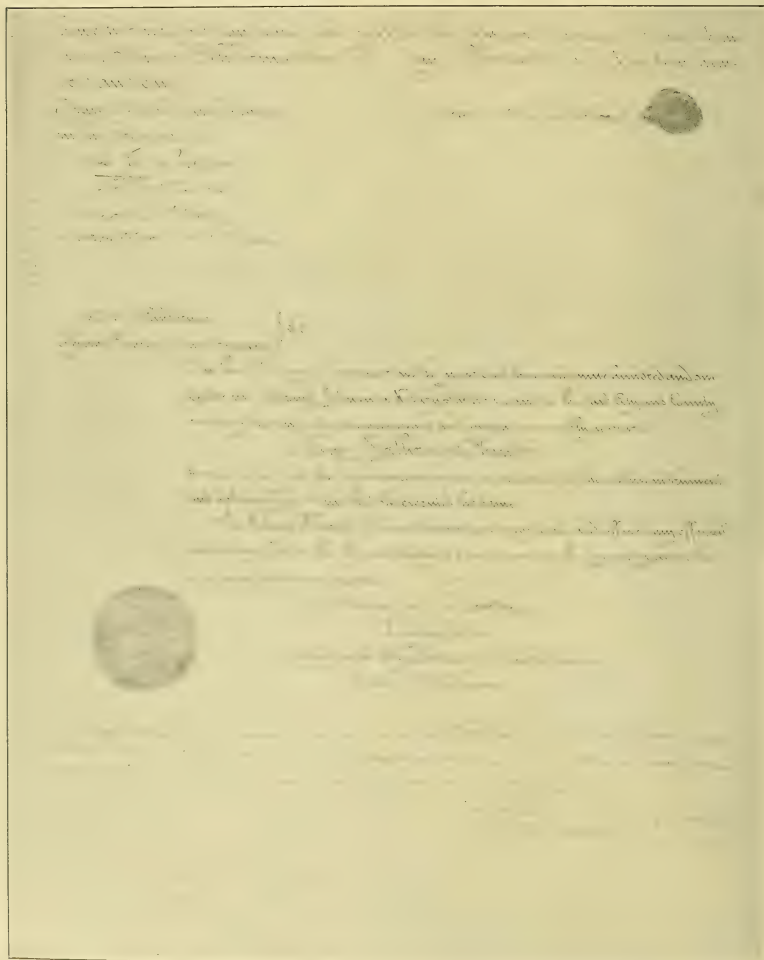
No especial care was taken in development, the plates showing but slight indications of under-exposure. The thick atmosphere, clouded by smoke from hundreds of cigars, added to the difficulty in making the pictures, there being a distance of over fifty feet between the camera and the center of the ring.

DEVELOPMENT OF SILVER PAPERS

Dr. Liesegang recently gave to the world the results of a series of experiments on this subject. He tested all the usual developers, and as a result he finds that gallic acid, hydrochinon, pyro and metol alone have practical value. Of these the first two have his preference. The gallic acid is used in saturated solution. If the print is long immersed (two minutes) the tones are green; if for one minute only, they are brown, of a fine quality, and require no gold toning. Hydrochinon, on the other hand, yields prints that cannot be used without gold toning. Pyrogallol is used in very weak solution and gives good browns without toning. Dr. Liesegang gives the following general principle: The less acid the developer, the greater is the depth acquired by the shadows.

PROTECTING A \$30,000,000 SIGNATURE BY PHOTOGRAPHY

The actual transfer of \$30,000,000 in gilt-edge securities and shares, vast buildings and grounds, is an incident calculated to make even the modern manipulators of the world's finances pause for a moment. But when such a vast sum represents the gift of one woman to an institution of learning, the whole world becomes interested. Such an incident occurred in San Francisco on December 10th, when Mrs. Jane L. Stanford handed over to the trustees of



the Stanford University deeds which made absolute the endowments of her late husband and herself.

The transfer was attended by no flourish of trumpets. It had long been contemplated by Mrs. Stanford and was only deferred awaiting necessary legislation to remedy defects in the original legal foundation of the university. This was secured during Mrs. Stanford's tour abroad, and no further action could be taken until her return. This occurred several months ago, and as soon as she had time to look about her she set her lawyers to work preparing the deeds. When they were ready she signed them and notified the trustees of the university that she was ready to perform her promise.

Without the least formality, Mrs. Stanford personally handed to Mr. S. F. Lieb, president of the Board of Trustees, the three documents that completed the gift. She essayed no speech, saying simply that, with the deeds, a load had been lifted from her mind; that she felt she had faithfully carried out the wishes of her late husband in seeing to it that the university had a solid foundation on which to grow and prosper in the years to come.

Before being filed, Expert Theodore Kytka made a complete set of negatives from the papers, and prints from each negative were attached to the original deeds when they were finally deposited in the County Clerk's office. Notwithstanding the fact that the original deeds were engrossed with Higgins ink on pigskin, it was feared that something would happen to the valuable papers, and so Photography was called in to make sure the perpetuation of the deeds.



SUNDAY AFTERNOON

BY ROBERT C. MCLEAN



APPROACH TO RUTLAND

BY W. R. HAYWARD

A DAINY AND NOVEL SUGGESTION

Individuality means much to the enthusiast in these days, when every photographer is striving to give his pictures a peculiar standing that will stamp them his own wherever shown, and to this end many tricks and wrinkles have been injected into picture making within the past year or so.

The accompanying picture is one from a series submitted to *CAMERA CRAFT* by W. R. Hayward of Rutland, Vt., and possesses a dainty suggestion that should prove valuable to many readers. The picture appears to be from a 5×7 negative and is placed in the center of an 8×10 sheet of *velox*. The smaller picture was evidently printed through a tear-out and developed at the same time as the larger picture. The whole sheet was then die sunk, after the fashion of the modern "artist's proof" of the professional, and the margins of the print roughed by pressing with sand paper. The picture was encased in a dark green folder, and formed, as a whole, one of the daintiest ideas ever presented to the editor.

The idea is subject to many variations, and the combination of a small section of one negative with a full-sized print from another one allows plenty of scope for artistic taste. Even as the etcher sketches a small vessel under his picture of the tossing sea, so can the photographer assist his picture by a tiny suggestion.

WHAT VARIOUS PROMINENT CRITICS HAVE TO SAY OF THE SECOND SAN FRANCISCO PHOTOGRAPHIC SALON JUST PASSED

BY DR. H. D'ARCY POWER

The Second San Francisco Salon has come and gone, and anticipation gives way to retrospection. A second salon more severely taxes the productive capacity of a section than the first exhibition, inasmuch as the first draws its material from the whole of the contributor's possessions, often the fruit of many years' labor, while subsequent shows are largely the work of the current year. Bearing this in mind, I looked, with no little curiosity and some trepidation, to the opening night to give us the measure of our annual advancement. Most art exhibitions give rise to two sets of impressions. First, a fixing of the attention, due to the magnitude, the color contrasts or the bizarre character of the exhibits; and, second, the impressions that arise from an appreciation of intrinsic beauty, subtle feeling, the power of evoking emotional states, or a recognition of technical labor and perfection. The first set of impressions is little more than a recognition of contrast; they are common to all the world, and appeal to the man in the street as much as to the artist. They are, too often, the measure of public approval, yet their effect is evanescent; familiarity robs them of their power, the sense of being unusual, of contrasting with that with which we were previously familiar, and they cease to attract.

The second Salon, looked at from this standpoint, was not so successful as the first. There was less to catch the eye, less to evoke the wonder of the uneducated, and, so far as my observation went, this feeling was reflected in the remarks of the crowd. There can be no doubt that size is an important element in exhibition work. The 4 x 5 or the 5 x 7 print that, viewed singly in your own home, receives your undivided attention, is lost on the walls of a salon. No concentration of the attention will eliminate the distracting influences of neighboring frames. It so happened that in this exhibition small pictures were largely predominant, to the great loss of the subject matter. One of the gems of the collection, "When Does Our Turn Come," by Miss Grace Hubley, was less than three inches in length, and, in consequence, the majority of the visitors entirely overlooked it. Either a picture must be large enough to fill the field of view at a reasonable distance, or it must be isolated to that extent. This fact is more fully realized in Europe, where exhibitions are of older growth, and has resulted in the increasing use of enlarged negatives, which, when carefully made, yield excellent results in carbon or gum.

Amateurs on this side should give this matter their earnest attention. Bromide enlargements do not fill the bill, and the 11 x 14 camera will always spend more time in the cupboard than in the field. Yet this is the minimum effective size for exhibition purposes.

If we turn to the second class of impressions, those dependent upon abiding worth rather than passing effect, the second Salon will unmistakably outrank its predecessor. This is not only the view of the writer, but of every competent critic to whom he has spoken. In common with the general tendency everywhere,



BALLADE OF THE PIPE

BY W. B. DYER

permanent printing mediums were progressively in evidence, and of these the pigment processes—carbon, ozotype and gum—show an advance on platino-type. Some of the gum prints exhibited a great improvement in quality compared with what has been previously seen on this coast; and it is slowly dawning on Western workers that if they are to keep in the van they must master the only process that gives free scope to the expression of individual feeling. However, it is not so much in technique as in subject matter that this year's Salon excelled that of 1901. Whether we consider the work of the East, as represented by such charming studies as those of Frank Eugene and Holland Day, or of the West in the productions of Laura Adams, Myra Albert Wiggins and many others, it was abundantly evident that a stronger thought and a deeper artistic

insight had guided the work of the past year. Nor do the signs of progress end here. The photographic journals of 1901, professional and amateur, were flooded with articles on the subject of composition, many of them by art teachers of eminence. That this instruction has had its effect was clearly visible in the generally good composition and tonality of the exhibits. It may, therefore, be safely declared that if the Salon of 1902 had less of the material that is calculated to attract the uneducated, it had more of genuine worth and beauty. As to the source of this improvement, it is to be noted that the second Salon had a larger proportion of Eastern and foreign exhibits, and to them, especially to the Eastern section, must be apportioned no small share in raising the general average.

Among so many good workers comparisons are odious; but, for originality, variety of conception and artistic treatment, it was generally conceded that the works of Frank Eugene stood easily first. They received plenty of adverse criticism, and, doubtless, deserve quite a little of it; but it is the criticism that is born of a strong challenge, and there were few to deny their power. Much of the adverse opinion was due to their framing, and the writer is free to admit his belief that while the paper mounts used may, now and then, be the best things possible, nevertheless, their invariable use is much in the nature of a fad, and to the detriment of the contained pictures. *Mais, chacun a son gout.*

Four hundred and fifty pictures were shown, whereof about two hundred and seventy were from the Pacific Coast, one hundred and thirty from the East and fifty from foreign sources. It is impossible to avoid the conclusion that too many were hung. Four hundred and fifty pictures mean distraction. Chicago was content to hang one hundred and twenty-seven out of one thousand presented. Had San Francisco cut down the exhibit to, say, two hundred, the latter would have attracted more and better attention. Moreover, there is another aspect of the question, namely, What is the purpose of a Salon? Is it to be simply an annual exhibition of pleasing pictures, with no ulterior purpose, or is it to be a justification of the claim of pictorial Photography to be classed among the fine arts? If the latter, which is the standpoint of all serious workers, then no picture has any right on its walls that would not be equally accepted by a hanging committee dealing with similar subjects done in charcoal, wash or pencil. Judged by such a standard, we cannot avoid the conclusion that the hanging committee was too kind-hearted. Nevertheless, the Salon was a success in the pleasure it afforded to all and the advancement it showed over 1901. The Salon is dead! Long live the Salon! Make ready for 1903.

BY O. V. LANGE

On first entering the Salon the impression created is decidedly favorable, on account of the number of frames exhibited, and, when going the first round, the spectator is instinctively led to notice and select the best pictures first. Therefore, the impression is given that this year's exhibition is, on the whole, better than that of 1901. That this is so in regard to the best pictures there is no doubt, as they are far in advance of anything attempted in Photography before. But, on making the second round, discordant and disturbing elements intrude themselves upon the observer. This is mainly due to the superfluous number of mediocre, small and uninteresting prints. I understand that over one thousand



MOTHER AND CHILD
by F. E. MONTEVERDE
(Second San Francisco Photographic Salon)

photographs were submitted and four hundred and fifty accepted. There really would not be much objection to this number if they had been of a higher grade of photographic production. But, as it is, if one hundred and fifty of the minor ones had been excluded, the general tone of the exhibition would have been much higher and more satisfactory.

I do not wish to be understood as saying that these photographs were not technically good. In fact, that is where the real trouble is. There is too much of the literal Photography and not enough of the artistic and poetic element in the make up of the whole, and I cannot conceive of an excuse for so many insignificantly small pictures. I use the word "pictures" in this sentence advisedly, because if some of the four by fives and three by fours had been enlarged by any of the modern processes, either on an enlarged 10x12 or 11x14 negative, and printed by contact on gum-bichromate or platinum paper, and framed close up, instead of a little print on a very large and inharmonious mat surrounded by a gaudy frame, the effect, as a whole and in detail, would have been on a higher plane of artistic merit.

I am sorry to say that inattention to framing and blunders in matting of the mere photographs was the rule instead of the exception. In fact, I noticed several in which five, and even six, disturbing lines surrounded the print, and these on a great expanse of mat more than eight times larger than the print, so that I have a very distinct recollection of this outlandish combination, and therefore no recollection at all of what the print was, because my whole attention had been drawn away from it. However good the print may be, if it is outrageously matted and framed it will be neglected.

A comparatively small print of an Indian mother and child, in a very low tone, appealed to me as a photographer and an artist. Of course, this must have been framed, but it was so unobtrusive that it just served the purpose for which it was intended, and I cannot recall its color, shape or design, therefore, it must have been in thorough tone and harmony with this strong and meritorious picture. Even some of the leading lights in our photographic firmament went astray in this particular, although it was not the rule.

My idea of a photographic salon is that it should be an educator of the public, instead of creating confusion by exhibiting a violent dissimilarity in the quality of the photographs exhibited. If it is necessary to have this kind let them be in a class and room by themselves. By not being stringent enough in regard to the poorer class of photographs and their make up, the photographers as a whole are not at all helped in the production of a higher grade of artistic expression, because the good ones become demoralized and will positively stop exhibiting, while the button-pressing fraternity will become more and more in evidence every year, thus making the object for which the salon was established of no effect.

BY ARNOLD GENTHE

If a photographic salon is to be "the great object lesson of the year as to the standing of pictorial Photography," the co-operation of all the leading photographers in the world would be required. The only salon which managed to overcome the numerous difficulties in accomplishing such an aim was the London Photographic Salon of last year, where a fairly representative exhibit



PORTRAIT OF MR. MORROW
by MISS ANNIE W BRIGMAN
(Second San Francisco Photographic Salon)

of all the leading workers in pictorial Photography was shown. The recent exhibitions of Philadelphia and Chicago suffered considerably because some of the acknowledged leaders, out of purely personal reasons, I understand, refused to contribute. We, here in San Francisco, besides having to contend with a similar unwillingness on the part of some of the best workers, are so little in touch with the big Eastern cities that our Salon cannot even be representative of the American school. It is bound to be distinctively Western, with the Eastern contributions forming an important but numerically small part of the whole exhibition.

The chief significance of this year's Salon lay undoubtedly in the fact that, for the first time, the possibility was afforded to compare our Western achievements with the work of some of the foremost artists of the East. And that this comparison was not entirely in our disfavor must be considered one of the greatest triumphs of our exhibition. Of course, we have a lot to learn yet. What most of us have to strive for is, above all, a freer play of imagination, a more distinct individuality of expression, a more judicious choice of the printing medium and a more refined way of presenting the finished picture.

In going over the exhibits carefully one could not help being impressed with the stereotyped character of some of the themes. Not many of the portraits showed that originality of handling which denotes an imaginative and truly creative mind. Of the landscapes, too many showed the same old story of the "Waning Day" and "Flock of Sheep," especially the latter. There were black sheep at nightfall and white sheep at sunrise, gray sheep in a fog and even blue sheep in what was supposed to be moonlight. And the genre pictures, as usual small in number, were mostly made with an evident appeal to the "gallery," reminding one too much of the photographs which an enterprising daily paper gives to its subscribers gratis on Sunday. Grave mistakes were occasionally made in the selection of the printing medium. Red fire-alarm pictures, blue moonlights and emerald green landscapes may attract attention, but they cannot claim any artistic distinction. Quite a number of frames were badly chosen, and many a well-framed print was marred by a bad signature.

Undoubtedly the Hanging Committee, which demanded a decidedly higher standard this year, would have refused more pictures if the necessity of filling a tremendous gallery, one hundred and ten feet long, had not suggested an occasional deviation from the intended plan. Though the four hundred and fifty pictures were hung with a judicious consideration for tone and shape, to fill such a vast hall with comparatively small frames is almost impossible without tiring the eye. I would advise the dividing of the long walls by simple, broad draperies, so as to diminish the wall space and to give the eye the necessary rest.

But, taken all in all, this year's Salon signifies a decided step forward. The quality of the good work showed a higher standard than last year, technically as well as artistically, and what was bad was at least of such a nature as to teach a wholesome lesson.

This plan has recently been adopted in foreign picture exhibitions and added so much to the appearance of the walls as a whole that it will be the rule in the future.

NIGHT PHOTOGRAPHY

BY ELLIS KELSEY

ARTICLE AND PICTURES REPRODUCED BY SPECIAL ARRANGEMENT WITH "THE PHOTOGRAM"

The photographer who determines to take up this interesting branch of work must not be wanting in patience, as that quality will be severely tried by the prolonged exposures necessary. Neither must he be afraid of exposing both himself and his camera to all kinds of adverse weather, as frequently the best effects are obtainable only on wet, snowy or misty nights. In addition, he must be prepared for a certain amount of ridicule from the general public for attempting such an apparently hopeless task as a rainy-night scene; and this attitude of the outsider is all the more difficult to understand when the fact is taken into consideration that the most astounding statements of novelists about the powers of photography at night are, such as the instance of a burglar in a dark

There are now, lowers of that pioneer Paul Martin, that the use after dark will be a very one and cease to

I am afraid some illustrating this article examples of their results if taken as suggestions serve their purpose photographers to take work and improve on

Photography at successful in its subjects than any era work, as the great difficulty of correct effects in gradations of black and white very rarely arises in photography scenes by artificial light.

Either hand or stand cameras can be used with a tripod, and, of the two, the fixed-focus hand camera is the more convenient, as the difficult matter of focusing in a poor light may thus be avoided, and one can be sure of the definition in any case if the objects are not too near.

A lens, preferably rectilinear, working at a large opening—f. 8 or, better still, f. 6—is absolutely necessary if comfort is to be considered, as in this class of work exposures are to be reckoned by minutes instead of seconds; therefore, we might say a large stop in the lens means a small stop to take the view. Ten minutes makes a great difference to the photographer on a cold or wet night.

A new lens working at f. 1 and less has just been introduced (see CAMERA CRAFT for June, 1901) which may prove to be of the utmost value for such work, as it is possible to give exposures of from a quarter to ten seconds only and yet secure good results.



It is better to avoid any bright lights in the foreground unless they are shaded in some way.

implicitly believed, taneous exposure on room.

however, so many fol- of "gaslight work," sight of cameras in come quite an ordin- attract attention.

of the photographs cle are not very good spective classes, but, tions only, they may by inducing other up this fascinating them in every way. night should be more quately representing other branch of cam- and almost insuper- rectly rendering color

photographing scenes



—a curved band of light instead of the regular disc.

by lights in the field of view, especially electric arc lamps, and no backing or coating can quite eliminate it when the lamp is in the foreground. A small amount of halation around the lights is sometimes an advantage pictorially; but if it is desired to completely avoid halation, the view should be taken in late twilight with about a half-minute exposure. The last quarter of an hour before dark is the best, for, if taken earlier, the sky is too light and gives a daylight effect.

It is better to avoid any bright lights in the immediate foreground unless they are shaded in some way. Much may sometimes be done by choosing the point of view so as to shut off the objectionable light by some foreground tree or post.

Ordinary gas or oil lamps are not so difficult to include in the view as incandescent gas, acetylene or arc lamps; but a safe general rule is to prevent all near lights from throwing their rays right in the lens, getting, of course, as much light as possible otherwise.

A plan I have adopted in some instances is to ascertain at what time the lights in a building will be extinguished and begin exposing only a minute before that time, finishing by the aid of the outside lights only.

In addition to the halation, a very annoying result from a bright front light is that a second image of it is formed by reflection in the lens, and appears conspicuously on the negative on the opposite part of the field of view. In my lens it resembles a star inclosed in an oval and is a serious defect.

On the important matter of exposures, they vary at $f. 8$ from a half minute to one hour as a rule, but exceptional scenes may require more. The shortest exposures are those taken by late twilight, just before darkness sets in, such scenes needing from a half minute to four or five minutes ($f. 8$). At night, even with a full moon—a great advantage—the times are longer, ten minutes to an hour and a half being the usual range ($f. 8$).

Isochromatic plates are the best to use, and it is absolutely necessary to have them backed. In my experience, those of medium rapidity are the best, as the faster plates fog readily with the glare from lights in the field of view. A double-coated plate, such as Seed's, is also very useful, but is rather slow, though excellent for well-lighted effects.

One of the greatest obstacles to success is the immense amount of halation produced



—the moon quite sharp in the view.



EASTBOURNE PIER

—the moon appears very small in comparison with the gigantic circles that artists * * * insert in their paintings.

All these exposures are for isochromatic plates of medium rapidity. It is an important point, in judging the exposure by moonlight, to take the height of the moon above the horizon into account, as that governs the result similarly to the altitude of the sun in daylight scenes; and as the best light of the day is when the sun is at its highest, so is the best light at night when the moon "souths." An almanac will give all particulars, and an important point to notice is, that the longer the time between the rising and setting, the greater the altitude of the moon, consequently, the shorter the exposure necessary. (The range between rising and setting is between seven and a half to fifteen hours at different times of the year.) In taking a view which includes the moon, a difficulty is encountered that, at first sight, seems insurmountable, and that is, during the long exposure required for the scene the moon has, apparently, traveled several diameters in the sky, owing to the rotation of the earth, and, consequently, makes its appearance in the negative as a curved band of light, instead of the familiar disc. This, of course, will never do, and to obviate this defect I adopted the following plan, which has, no doubt, been discovered by others as well:

Expose for the necessary time on the scene, carefully excluding the moon from the field of view. Then elevate the camera to *include the disc* of the moon (after capping the lens, of course) where it would be most appropriate, carefully considering any reflections in water. A short exposure of a quarter to an eighth of a second on the same plate will complete the effect and get the moon quite sharp in the view.

It will be noticed that the moon appears very small in comparison with the gigantic circles that artists delight to insert in their paintings, but, by using a long-focus lens for the snapshot, the disc will more nearly resemble the size of those we are accustomed to see in pictorial works.

If there are any sharply defined shadows in a moonlight view, do not give a longer exposure than really needful, as the outlines of the shadows will probably get blurred by the apparent movement of the moon.

A view taken entirely by moonlight requires (f. 8) from twenty minutes to one hour, even with full moon. (See picture of Halisham Church.) Imitation moonlight effects, although not belonging to true night work, are worth the attention of those who want to get the most realistic results, for, in some cases, they are superior to those really taken at night.

They are produced by greatly under-exposing and then over-printing a daylight view of the scene, pointing the camera toward the sun while it is partly obscured by clouds, or, in some cases, just excluding the sun from the view.

The advantage of this is that objects in motion, such as clouds, waves, etc., can be secured by shutter exposures instead of being completely lost, as in the real night view with its long exposure. The absence or presence of waves affords a ready means of ascertaining whether a moonlight photograph was really taken at night or not.

It will be advisable to explain one or two points in connection with the picture of Eastbourne Pier. Firstly, the clouds are real, having been almost stationary throughout the twenty minutes. Secondly, the slight indication of foreground waves is

To return to the
The subjects are very
classified as follows:
ally on rainy nights;
public buildings,
piers, bridges, light-
luminated gardens;
on fire; lamplight ef-
and figure studies

We will consider
Street Scenes—
jects makes very ef-
ally on rainy nights
heavy rainfall, when
tions from the road
gloom. Take care
not get covered with

Snowy Nights—
does the most to shorten the exposure, and some of the most effective night views have been taken of winter scenes.

One rather novel result in this kind of work I secured a year or two ago, by taking a tree covered with snow and well illuminated by a gas lamp among the branches.

An exceedingly beautiful effect may be obtained by taking a moonlight view



HALISHAM CHURCH

penciled in.
genuine night work.
varied and may be
Street scenes, especi-
snowy night views;
i. e., churches, halls;
houses, parades; il-
fireworks, buildings
fects; firelight effects,
and genre subjects.
each in detail.

This class of sub-
fective views, especi-
or shortly after a
the numerous reflec-
brighten up the
that the lens does
raindrops.

Of all things, snow



IMITATION MOONLIGHT

meet with the same disaster as that of a friend of mine, who carefully set up his camera on the sands and, after ten minutes' exposure on a very pretty illuminated effect, went home, rejoicing in having secured a good result, only to be disappointed in the ensuing development by finding that all his lights had become *vertical lines*, like a lot of luminous streaks. This was caused by the gradual sinking of the camera in the damp sand during exposure, and should be guarded against by placing three small tin lids for the tripod to stand upon.

Photography on the beach, on a dark night, is not the easiest operation, as, in going from the glare of the lamps into what seems inky darkness, one flounders through rock pools or falls over boulders, with probable damage to camera and self.

A moonlight night is essential for the best results, not only for comfort in getting about, but for the important reason that the outlines of all objects come out clearly against the sky line instead of being lost in gloom.

The detail is also better rendered, and one may lay down as a general rule: Always select the time about full moon for night work.

Lighthouses are attractive subjects, and a useful suggestion to insure the beam of light standing out well is to select a slightly misty night for the attempt. If the light is a revolving one, shield the lens when the rays front the camera.

Illuminated fetes in parks or gardens present many interesting features, with their fairy lamps and Chinese lantern effects; but beware of a windy night, as the paper lanterns oscillate with the slightest breeze.

Fireworks, especially set pieces, are easily obtained with a fixed focus camera. Wait until the design is fairly alight, and expose from a few seconds to a quarter of a minute on it. Of course, moving effects

of a picturesque church after a snowstorm, introducing the moon by the method described earlier. The church should be illuminated inside, of course.

Churches, Halls—All buildings show up well when lighted and generally make good subjects.

Piers, sea fronts and bridges all make pretty effects with their reflections in the water.

If a sea front is photographed from the beach, take especial care to insure a firm support for the camera or you will



Exposure, 3 minutes at F 8—Late twilight

are impossible unless they are exceedingly brilliant, so that a snapshot can be taken.

Buildings on fire are frequently attempted, but it is difficult to secure a suitable standpoint. An exposure of from five to ten minutes would be about right, although shorter exposures might be successful.

Lamplight scenes are charming when well done, and, by the use of magnesium in or near the lamp globe, and also a little more to light up the dark side of any figures, the exposure may be shortened and a good result obtained.

Firelight scenes are also well worth trying, and here magnesium is indispensable.

For such effects, start with an empty grate and place a lighted spirit lamp or candle in it, using crumpled white paper to imitate coals. Then focus and arrange the figures, place some figure or *the view of the lamp camera*, and, after all posture, ignite from inches of magnesium *the grate*. This can ing the tape at the and inserting it from interfere with the is completed by burn-inches of magne-side of the room, to contrasts of the first advisable to have throughout the

The most difficult photography is un-genre subjects and ally, as the length ous difficulty, but as the best chance for any artistic work, it should be attempted again and again in the hope of attaining some success, however small.

A few words on the development and printing of night scenes may be useful. First, as to development: The negative has an almost "positive" effect at times which is rather puzzling to beginners, owing to the sky appearing last instead of first, and the plate also looks under-exposed, but a trial print will soon show whether it is a success.

Develop with a developer strong in alkali and rather weak in the developing agent; also, keep a strong solution of bromide handy to apply with a brush locally if much halation is feared. Platinotype and bromide papers are the best as a rule, especially in the larger sizes, but for firelight or lamplight effects a warmer tone is desirable. Transparencies are still better. Of all means of showing the results the optical lantern easily takes first place, for the whiteness of the screen, compared with the dark surroundings, intensifies the luminous effect of any lights in the view and gives a most realistic appearance, far exceeding any print on paper.



Exposure, 10 minutes at F. 8 — Fast Iso. plate

taking care to so object as to *shut off in the grate from the* is ready for the ex- about nine to twelve tape in the flame *in* best be done by plac- end of a long stick one side, so as not to view. The exposure ing another nine sium on the camera relieve the harsh exposure. It is also the ordinary light room.

cult branch of night doubtedly that of figure studies gener- of exposure is a seri- this branch presents

If a blue tone is desired on a slide or on paper, the following is an easy method, toning in less than half a minute:

Take one dram of any ordinary ferro-prussiate printing solution* and add one dram of hydrochloric acid, making up the quantity to one ounce with water. Immerse the plate or print for a few seconds until toned, and wash for a few minutes only. Prolonged washing removes the color.

For the first attempt at night photography it is a good plan to experiment on your own residence. Choose a clear, moonlight night, and, after placing lights in most of the rooms, set up the camera in the garden, if you can include the whole building from such a position. Then, after starting the exposure, the apparatus can be safely left until the time is up, the photographer engaging himself indoors. With f. 8 an exposure of twenty or thirty minutes would be about right. Choose the moonlight side of the house if possible.



Exposure 35 minutes at F 8

After a trial or two at home, a street scene should be attempted. No notice need be taken of anything passing the camera *unless it carries a light*, as the small time taken in transit does not affect the plate. If a carriage or bicycle lamp crosses the view, it must be promptly excluded by either capping the lens (with risk of movement) or, better still, by standing in front of the camera until the danger is over. If the moving lights were not shut off the result would be a lot of parallel white horizontal lines on the print, quite spoiling the view.

It is also a good plan to stand in front of the lens while opening or shutting it, as the slightest movement, even for a second, might duplicate or prolong any bright light in the foreground.

In conclusion, it is to be hoped that many photographers will take up night work, more especially the difficult genre branch, and if they have patient and persevering friends or relations to show a practical interest by posing as subjects, there seems every prospect that some really artistic advance may be made in this direction in the future.

[The editor regrets very much that a number of the engravings designed to accompany Mr. Kelsey's article were so badly damaged in transmission from England as to prohibit their use. While this, in no way affects the value of the article the circumstance is unfortunate.]



Lighthouse at dusk — Exposure 35 minutes

* Ammonio-citrate of iron, 80 grains; water, 1 ounce. Red prussiate of potash, 60 grains; water, 1 ounce. Dissolve *separately*, and mix together.



A STUDY
by W. B. DYER
C. S. A. P.

PRINTS FROM WEAK NEGATIVES

BY SIR WILLIAM ABNEY

A task which often falls to the lot of the amateur photographer who happens to be a little bit in advance of his fellow amateurs in matters photographic, is the enlargement or printing of negatives which are much too thin to give a good print, even after intensification. The writer is one of the "unfortunates" who is supposed to know how this can be done, and very little scruple is shown by his friends in calling on him to do what appear to be almost impossibilities. Recently he has had some very thin negatives to get prints from somehow or another. By what process was quite immaterial, so long as a decent print was obtainable.

In one particular case, it was only after adopting every artifice known to him that success was obtained. The negative was very, very thin, and the maker explained that he thought he was obliged to stop development when a trace of the image began to appear at the back of the plate. It was full of detail, but the thinness made one think that a print from it was almost an impossibility. Reasoning on the matter, it was evident that a direct print by contact was impossible, and the only way of succeeding was to secure a bromide print by means of the camera.

That this should be so is due to the fact that the contact printing opacity of a negative is only about half that of the negative when placed at a distance from the printing papers. The reason of this increase it is beside the question to go into. It remains that it is a fact.

A fairly successful print was accordingly made in an enlarging camera, but still it was flat and wanting in that brilliancy which the owner thought himself entitled to expect. The question that then arose was, What method should be adopted to increase the brilliancy still further?

Mr. Chapman Jones with isochromatic, and the writer with ordinary plates, found that the gradation caused by red light was considerably steeper than that given when the blue light or white light was employed, more especially with the ordinary bromide plates. The negative was, therefore, illuminated with light coming through a piece of ruby glass backed by a pot orange glass, the latter being used to cut off every scintilla of blue light, which ruby glass is known to allow to pass, and which is insignificant when the source of light is a candle or a petroleum lamp, but which is most mischievous when daylight is employed as the illuminant.

Had this light not been cut off as described, the print would really have been produced by this small amount of blue light, since it would have had more photographic action than the red in the light alone, and the advantage of the red light would have been lost.

The exposure necessary was very prolonged. Instead of a couple of seconds being required, the exposure had to be made for four minutes in order to obtain a good, developable image; but the result was favorable and the print had more "life" in it than before.

This having been done, it struck us that a still more favorable condition for increasing the contrast might be obtained by increasing the time of exposure, for it is known that on certain plates and on bromide paper the less the

intensity of the light the greater is the contrast. Accordingly, the stop in the lens used in the production of the print was diminished to a quarter of its diameter, and the exposure was increased sixteen times over that previously given, that is, to an hour.

The print did not develop satisfactorily, showing signs of under-exposure, but with an hour and a half exposure the print came up bright and full of contrasts, which were absolutely wanting before. The owner of the negative was delighted and asked for a supply of a dozen prints! Eighteen hours was a trifle too long to expend on him, and yet, having a somewhat forlorn wish to do what one was asked to do, it was determined to proceed on another tack, and that was to boldly produce another negative from which to print.

The argument used was this: A transparency could be produced in the camera in which the gradation would be better if the same artifices as those used for the printing were observed, and it might be possible to omit the diminished intensity of light action, as another negative from this positive would have to be produced. This was carried out successfully, but still there was the appearance of a reproduced negative when the contact print was taken from it, though the amateur did not discover the fact.

The transparency (positive) was full of detail and was better brought out than in the original. The negative seemed to be still better, but there was a certain amount of want of vigor in the most opaque parts. In other words, it was a little too black and white. This plan, though it satisfied our friend, did not satisfy ourselves, and yet another plan was tried.

A print, enlarged to a scale of five times the diameter of the original negative, was taken, with all the precautions indicated above, but the larger stop was employed. The time of production was not increased beyond the one and a half hours, as, owing to the size of the picture, the intensity of the light was considerably diminished. The surface of the



EVENING

BY H. A. STEMPEL, C. S. A. P.

paper on which the print was taken was polished. This print was copied in the usual way and an excellent result produced from the negative obtained.

The success of this plan reminds us of the days when the Obernetter collodio-chloride paper was in use. It was excessively difficult to handle in the toning and fixing operations, as it was very liable to chip off in parts, but when a whole print was obtained it was exceedingly bright and brilliant, and every detail from the negative was shown with a delicacy that was unknown in the ordinary albumenized silver prints. It must, however, be confessed that the present gelatino-chloride prints approach it.

A print made upon Obernetter paper was capable of giving a reproduced negative which left nothing to be desired. There were no light lines round the dark parts which are so common in reproduced negatives, and the prints from it were admirable. In fact, enlargements could be made from the original print which could not be distinguished from prints made from a large direct negative.

It was also quite feasible to transfer to glass, after toning and fixing, the collodion film from the Obernetter paper, and to use it as a transparency from which a negative could be made. The Obernetter paper was, it will be recollected, collodio-chloride coated on what was known as porcelain paper. The porcelain was probably prepared with baryta, much in the same way that the paper used for heliotype or collotype was made. At any rate, it gave a smooth surface impervious to alcohol and ether. We remember using such a surface in a panoramic camera, coating the surface with collodio-bromide emulsion. The paper lent itself to bending in the arc of a circle, and, after the image was developed, it was transferred to a glass plate.

But to return to our subject. It should be remembered that a developed print, taken in a camera, can always be increased in contrast by using a minimum of light in its production, and by using red or orange light, more particularly if the paper used be of a very slow brand, such as is often to be found in the market at the present time.

The developer has very little to do with it if the development does not take place too rapidly. Amidol is a very excellent developer for the purpose and gives nice black tones. Care should be taken not to use a developer which will stain the paper, and perfectly clean hypo is almost a necessity to secure purity in the whites.—*Photography.*

DRYING OF ROLL FILMS

Among the many little troubles connected with roll films, none is more annoying than the constant tendency to curl, which the glycerine bath only partly corrects, and that at a cost of its own. Dr. F. Raschig, writing in the *Photographische Rundschau*, describes a little dodge which we have tried and found entirely successful. It is to curl the films in a spiral round a wooden cylinder, film side outward, the two ends being fastened with thumb tacks. When the film is dry it should be allowed to remain for two days on the cylinder, or else placed, for a few hours, near a stove where the temperature is between 120° and 140° Fahr. This treatment completely removes the tendency to curl.

IMPROVEMENTS IN DEVELOPING GUM PRINTS

THE FOLLOWING SUGGESTIONS UPON THE DEVELOPMENT OF GUM-BICHROMATE PAPER WERE SUBMITTED SOME MONTHS AGO BY A CONTRIBUTOR WHO NEGLECTED TO AFFIX HIS NAME TO THE MANUSCRIPT. HOWEVER, THE MODIFICATIONS SUGGESTED HAVE BEEN TRIED AND FOUND TO BE EXCEEDINGLY VALUABLE AND WELL WORTHY OF EXPERIMENT. — EDITOR.

Bichromatize the paper for a longer period than usual. This will make it more sensitive to light and cause it to work softer. Give a shorter time of exposure and employ, after having washed the exposed sheet in cold water, a bath of lukewarm water for five minutes prior to developing the print. The object is to soften the coating before developing. Then develop at a lower temperature than given in previous instructions. Beautiful detail and softness is thus obtained, and even small work is satisfactorily turned out in this manner.

The following is an example: 5000 parts of water, 250 parts of bichromate of potash, 60 to 80 drops of ammonia, .091 specific gravity. For instance, to hasten the drying 250 parts of 90% alcohol may be used. Pass the paper through the solution about thirty times. Expose a little less than usual. Wash out the chromium for ten minutes in several changes of cool water. Place the print for five minutes in lukewarm water, 20° R. Then develop at a temperature of 25° to 30° R., but use little sawdust.

In case of over-exposure return the print to lukewarm water for five or ten minutes, then continue to develop it at 35° R., with a little more sawdust than previously used.

When taken from the chromium bath the paper should dry from three to four hours.



A MEXICAN ROAD

BY W. J. PIATT

CAMERA CRAFT

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VOL. IV.

SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1902

No. 4

A FEW WORDS OF ADVICE Last year the Photographers' Association of America held an "Educational Convention." It was not a tremendous success. Instead of being educational, it was, on several occasions, very tiresome. The simple reason of it all lay in the fact that the students in this educational meeting were treated to a collegiate course instead of being first taken through a preparatory school. Lectures on old masters and photographers of bygone days are exceedingly interesting to the men who have studied the history of Photography for years and have passed through an age of photographic and artistic experiences, but to the plain, everyday photographer, who expended some days of his time and some dollars of his savings to attend the convention, expecting to derive direct benefit from the lectures and talks, the convention was distinctly disappointing.

CAMERA CRAFT does not wish to be understood as saying that a careful study of the works of the old masters and a thorough appreciation of the canons of art are not necessary before the latter-day photographer can become truly great. Indeed, its whole effort during the past has been exerted to convince the professional photographers that a higher standard and a better understanding of the rudiments of art are necessary before the producers of commercial portraits can claim the recognition they desire. On the other hand, it does claim that professional photographers have suffered from the advice of men who have pointed to the work of the old painters as the highest and best examples of portraiture, and said: "Here is your school — follow it."

What the professional worker does need is a proper grounding upon the art principles of today. The dark and richly colored work of the old masters appeals to the instincts of those thoroughly versed in art, but when they are reduced to black and white the wildest enthusiast cannot say that the popular taste will be influenced by their appearance. The professional photographer deals with every class, the high as well as the low, the parvenu and the dilettante. His work, however diversified, must be held within bounds, else the abundance of styles and tones will confuse both staff and patrons. Therefore, it is necessary that he produces work that possesses interest to almost every class alike. To do this his pictures must possess artistic merit — merit not of the old schools but of the new.

Popular taste is fickle, yet is easy to please. The light and dainty has an ever-abiding charm for the multitude. The heavy and dark may attract for a time, but its days are few and numbered. Therefore, instruct the latter-day workers in the paths that lead to pleased patrons and a full purse. Leave the study of the old masters to the amateurs who have time and inclination for the work and give the professional a chance to learn the foundations of the art of today.

Let those in charge of the convention of 1902 give the professionals a few plain talks upon the modern and accepted ideas of art. Tell the man who is seeking to work for every class how to meet and please his patrons. Tell him the proper way to make known the worth of his products to the people who need his wares. Do not let the artistic movement sweep the field clean of practical instruction.

The January edition of CAMERA CRAFT is completely exhausted and cannot be supplied.

Our brother in Chicago, F. Dundas Todd, sometime since was BATTLE OF guilty of a most heinous offence, to wit, publishing a book upon THE GIANTS lay matters. In the further error of his ways he sent a copy to a number of photographic editors, hoping in this way to forestall any adverse criticism upon his fall from grace. Journalistic courtesy being well developed in America, the move proved to be a wise one, but Mr. Todd did not allow for the peculiar temperament of the British photographic press, and, to his surprise, received several warm thrusts at their hands. Then Mr. Todd wrote the following letter to the editors of the *British Journal of Photography*:

GENTLEMEN: When I sent you a copy of my latest baby I made up my mind that I would get from you the hardest rap that I would get from anybody, and out of the very large number of reviews the book has received yours is the one that roasts me the worst, so that you will understand I am not in the least bit disappointed; in fact, rather tickled at my cuteness, for I had sized you up as being psychologically about the date of the seventeenth century, this being as far as your mental guardians had permitted you to develop. * * * Put on your thinking cap, keep your eyes open, and possibly you may learn something. Yours sincerely,
F. DUNDAS TODD.

In response to this warm epistle the British editors replied:

A slight acquaintance with history would probably have saved Mr. Todd from paying us the obviously unintentional compliment of association with the intellects of the seventeenth century, amongst whom, *cum multis aliis*, he will, no doubt, be surprised to learn were Bacon, Shakespeare, Raleigh, Kepler, Cromwell, Milton, Dryden, Descartes, Huyghens, Newton, Cervantes, Velasquez, Rembrandt and Vandyck. If we refrain from saying precisely how we have "sized up" Mr. Todd, he will, no doubt, permit us to remark that if we had to make a choice of intellectual company we should, for reasons we would rather not state, select the seventeenth in preference to the twentieth century. * * *

Meanwhile, we understand that Mr. Todd is hastily arranging for an English edition of "What Are We Here For?"

THE EDITOR'S MISCELLANY

BOFLAY

You mix a fluid with ten parts of water, place your exposed plate therein and then go to dinner or business or bed, or anywhere for twenty minutes or more, and then return to find your negative developed, fixed and perfect, is what is promised in Boflay. So far as our experience is concerned, the promise has been made good. We tried the mixture on normal, under and over exposures, and from all we obtained (not identical) good negatives. In those near normal exposure the density was of ideal quality; in the under and over exposures it was as good as we could have made it by tentative development. We experimented with paper and lantern slides, but without success, the lantern slides being lost in dense chemical fog. However, it is not recommended for these latter. Combined developing and fixing has long been known, the agents usually being pyrocathechin and hypo, but is little practiced. In Boflay it is brought within the reach of all, and doubtless will become extremely popular.

LOS ANGELES CAMERA CLUB

Great progress has been made by the Los Angeles Camera Club during the past year.

Many new members are being constantly added to the roll, fourteen members having been initiated at a recent meeting.

A club paper, known as the *Los Angeles Camera Club News*, and issued twice a month, is being published regularly and keeps the members advised as to the doings of their associates, regular meetings and class work. A very successful exhibition of club work was given during the fall.

A selection of ninety prints, the work of Dr. F. Detlefsen, is now on its way from Chicago. These pictures have been kindly loaned the club by Dr. Detlefsen for exhibition, after which they will be sent on to the California Camera Club.

Improvements are being made in the bromide room and increased facilities for bromide enlargements and lantern-slide work will soon be had.

Club classes were formed at the beginning of the season for instruction in the technical work of Photography, and have been well attended. These classes have been conducted

by the best-known professional photographers in Southern California, and the points already covered are: "Developing with the Various Popular Developing Agents"; "Printing with Gaslight Papers"; "Doctoring Negatives, Including Reduction and Intensification"; "Printing Mounts to Secure Rembrandt Effects," and "Retouching." These lessons will continue throughout the season and embrace enlarging and lantern-slide making; also portrait work.

The custom of serving afternoon tea every Saturday, which was inaugurated last spring, has been continued throughout the fall and winter, and many a merry gathering has taken place in the reception-rooms. The gentlemen have taken as great an interest in these functions as the ladies and have presided at the tea table several times.

Occasional outings have called out large contingents of members, and the private cars chartered for the occasions have been filled to overflowing. The last outing to Pasadena on New Year's day, to secure pictures of the floral parade, was particularly successful.

At a recent meeting of the Board of Directors an appropriation was made for the club library and a committee appointed to secure new publications.

The work of the club is showing great improvement, the general tone of the pictures at the last exhibition being far ahead of any former collection. The portrait gallery is much in demand, and some of the members are turning out very pretty work.

OREGON CAMERA CLUB

At the annual meeting of the Oregon Camera Club, held on January 14th, the following officers, constituting the Executive Board, were elected for the year 1902:

S. A. Thrall, president; Alfred Anderson, vice-president; S. C. Catching, secretary; C. H. Hoeg, treasurer; M. R. Spaulding, H. J. Thorne, Wm. S. Macrum, H. Claussenius, Jr., J. W. Buckley, directors; and T. Birdsall, lantern slide director.

The club has just closed one of its most successful years since organization, and the new board will undoubtedly continue the good work and make a better showing at the end of the present year, if such can be done.

Commodore M. J. Steffins of Chicago; one of the foremost figures in Photography today, was seriously injured in his home city, on January 30th, by being struck by a Lake Shore train while out riding with a friend. His left leg was broken in three places and he sustained a number of other injuries and bruises about the face and body. The physicians in attendance state that he will recover from his injuries, but that he will be confined to his bed for at least two months. CAMERA CRAFT unites with the Commodore's other Western friends in wishing for his early recovery.

The Folmer & Schwing Manufacturing Company of New York have just completed for a Western photographer a mammoth skyscraper camera, taking a plate 24x36, with 60-inch focal capacity, being fitted with light-weight curtain slide holders, double swing, reversible back, rising and falling front and back focus.

Every adjustment of the camera is operated by a fine rack and pinion, or worm screw. The entire woodwork of the camera is ebonized and all metal parts oxidized, and is furnished with a special carrying case made of light material, making the entire outfit very portable.

The camera is so arranged that an extra wide-angle lens of 6-inch equivalent focus, or any lens varying in focus up to 60-inch, may be used.

The National Homemaker of Washington, D. C., offers a series of prizes for photographs depicting irrigation scenes and homes made by means of irrigation in the dry portions of the West. As this journal is conducting a vigorous campaign along the line suggested

by its request for illustration, it would be well for all amateurs who have prints of the character requested to try for the prizes, especially as the magazine promises to pay for all acceptable prints.

LIGHTS THAT FAIL

It is a matter of more than idle curiosity to speculate how many of the brand-new recipes, latest dodges and new discoveries, "made in Germany" and elsewhere, are anything more than good "copy," well circulated. We have bitter memories of valuable time wasted and good material spoiled on many a photographic wild-goose chase, started by a clipping from some photographic journal. And so has everyone who has a working interest in Photography. Sometimes these failures are due to lack of essential details, sometimes to want of correspondence between chemicals in different countries; to errors

in translation of foreign writers; sometimes to bogus recipes, and not infrequently to failure on the part of those trying them to comply strictly with the given directions. Editors of photographic papers cannot be held responsible for any of these troubles except bad translation or poor reporting. A photographic



COMMODORE STEFFINS WHO WAS SERIOUSLY INJURED IN CHICAGO RECENTLY—BY J. C. STRAUSS

DEPTH OF FOCUS

Dr. Maurice D. Brown of Alameda writes the editor as follows:

In the November *CAMERA CRAFT* is a most excellent paper on "Still Life and Its Possibilities," by Mr. F. E. Monteverde, illustrated by the author. The illustrations are very fine and show perfect mastery of this subtle branch of photography. For the results he obtains I have nothing but praise; for the camera, lens, plate, etc., etc., he advises, his results show his wise choice. But with his *reasons* for advising the choice of an anastigmat I take issue.

He says: " * * * The lens is of the greatest importance, and preference should be given an anastigmat, as it is extremely advantageous, in the arrangement of the articles forming the picture, that the lens have *great depth of focus*, because it permits the placing of the objects in a more natural grouping than has heretofore been possible with the use of the *ordinary rectilinear lenses, in which there is very little depth.* * * * " (Italics mine.)

Depth of focus is that property of a lens which permits the images of objects situated at varying distances from the camera to be in sharp focus on the ground glass or plate at the same time. The extent to which any lens possesses it is dependent entirely upon its focal length and not upon any peculiarity of construction. The most expensive anastigmat and the cheapest of rectilinears, if their focal length be the same, their depth of focus will be identical.

An apparent difference in depth seems to exist between two lenses of the same focus when used with different-sized apertures, the lens with the larger opening apparently having less depth of focus than that with the lesser diaphragm. Use diaphragms of the same diameter in each lens and the depth will be of the same degree. For example, an anastigmat of 8½-inch equivalent focus, working with an aperture of f. 7, and a rectilinear of the same length of focus with an aperture of f. 9, the rectilinear will apparently have the greater depth of focus. Reduce the diaphragm of the anastigmat to f. 9 and no difference will exist. Hence, the rule that, whatever may be their construction, depth of focus is an invariable quality in lenses of the same equivalent focus, when used with the same sized diaphragm.

That a knowledge of these elementary principles of optics is not essential to success in the art of photography is well known; still an understanding of the tools of the craft is not uninteresting.

AGFA INTENSIFIER

PROFESSOR RODOLFO NAMIAS

This new intensifying preparation consists of a mercury salt and an alkaline sulphocyanide, and is prepared by the Actien-Gesellschaft fur Anilin-Fabrikation, Berlin, Germany. It is a colorless liquid, which does not form any precipitate. For use, dilute

journal is a purveyor of news and not a text book. It reports what seems of interest or value, and that is all it is answerable for. It is obviously impossible that it should personally test the hundreds of recipes and discoveries described in its pages during the course of a year. These remarks are called forth by a letter from a correspondent, who complains that two recipes published in *CAMERA CRAFT* have caused him to waste time and paper. First, in regard to a method of gold toning with the addition of formaline. This writer claims that he does not obtain the results described, but only yellow, muddy tones. Why he fails we know not, as our experiments with the gold formaline bath have yielded good prints, in no sense muddy. Moreover, since *CAMERA CRAFT* published the notice in question the method has received the warm commendation of the well-known expert, Mr. W. E. Newcomb. Secondly, our correspondent was equally unlucky in using a borax and shellac varnish. As this is an old and well-tried servant, we can only assume that, as in the first case, the fault lies with the user. If he will send his failures to this office we will try to enlighten him; but in no case do we guarantee the results of correspondents or the reported work of foreign discoverers. We test them frequently for our own satisfaction, and in such cases usually give the result of our findings. But such work is *con amore*, and not an obligation.

The Boflay Camera and Chemical Company filed articles of incorporation recently in its home, Newark, N. J., with capital stock at \$100,000. There is paid up \$45,000 by the following incorporators: Charles W. Boflay and Abram H. Post of Newark, N. J., who own \$15,000 of the stock each, and Frank D. Vreeland of Paterson, N. J., \$15,000.

The Sixth Annual Convention of the Photographers' Association of Wisconsin will be held at Milwaukee March 11th to 13th. This convention, one of the liveliest of the State Association, is regarded with interest all over the country, and as the meeting follows the precedent set by the Photographers' Association of America in naming itself an "Educational Convention," the coming session will be looked forward to with much pleasure.

Mr. Thomas F. Howe, representing the Imperial Camera and Manufacturing Company of La Crosse, Wis., called upon the Pacific Coast trade during January, making many friends all over the line.

one part Agfa-Intensifier with nine parts of ordinary water.

The negative which is to be intensified must be thoroughly washed and put into the dilute solution. Intensification starts immediately, and in about ten minutes the highest degree of intensification is reached. By transmitted light no considerable addition to the density of the negative is noticeable, but the precipitate produced by the intensifier on the image in place of the silver is of a very non-actinic nature. Every negative which is intensified in this way will therefore give much better copies than before.

Although it may seem to the eye as if the degree of intensification gained by intensifying with sublimate and following blackening process by means of ammonia is higher, there is, practically, scarcely any difference between a negative intensified in this bath and one treated with Agfa-Intensifier.

The Agfa-Intensifier has the advantage over all similar solutions that it does not require a secondary blackening. By treatment with the intensifying solution and half an hour's washing a durable image is obtained that will, perhaps, get slightly darker in color on coming in contact with light; but, besides this, it does not change its appearance, not even when exposed to the light for a very long time.

Another advantage of the Agfa-Intensifier is that it has no influence upon the transparency of the image, a fact that cannot be claimed for the action of sublimate and ammonia.

When employing the latter process and when, after using the sublimate bath, the image is not thoroughly washed, a white precipitate of mercuric-ammonio-chloride will be noticed, which has a bad influence upon the transparency of the negative.

If a slight degree of intensification only is wanted, the negative should remain a correspondingly shorter time in the intensifying solution.

I have also treated collodion negatives with Agfa-Intensifier after having been developed, fixed and thoroughly washed. The negatives were put in the same strength solution of the Agfa-Intensifier mentioned before for the treatment of the silver bromide gelatine plates.

The result is obtained with great celerity, and in five minutes a very considerable intensification is arrived at.

On drying, the image assumes a perfectly white color. This appearance is strange, and one is inclined to believe that the precipitate

on the collodion negatives is of another form than that on the bromide of silver-gelatine negatives. By blackening with ammonia before drying, the negative will improve as regards density.

Intensification done in this manner is greater than when obtained by means of any other method, except intensification done with sublimate and following bath of ammonia sulphide, but the latter process has many other disadvantages.

The Agfa-Intensifier can, therefore, be employed with great advantage in the photo-mechanical reproduction works or the intensification of line work.

MORE ON WETTING PLATES

In commenting upon a recent article in CAMERA CRAFT Mr. H. H. Atwater of New York writes:

I was much interested in reading the article under the heading, "Shall We Wet the Plate," page 36, in the November number of CAMERA CRAFT, as it reminded me of a similar experience several years ago. I had some trouble with my plates, no doubt caused by using too little developer, when I chanced upon an article in one of the periodicals advising that plates be washed before development. The idea seemed a good one, as it would wash off any speck of dust that might have lodged on plate. So, under the water tap my next plates went. The developer flowed over the plate like "greased lightning." Picture came up well and everything looked favorable for a good batch of negatives when cleared in the hypo bath. But what caused those round holes about as large as the head of a pin? Every plate had from one to half a dozen. The plates were the same make that I had been using right along. Was it possible that the sensitizing solution had not been properly mixed with the emulsion? I concluded to try the balance of the box, and if I had no better results that brand of plates would have to go. I would not patronize a manufacturer who turned out such careless work. The next half dozen turned out even worse than the first, so I purchased a box of another make. But what was my surprise to find the same pin holes—hundreds of them. I had used new developer and new hypo. I could think of but one cause for the trouble: I had washed the plate before developing. I tried a plate without wetting and it came out as clear and perfect a plate as one could wish. I had no more trouble after that. I went back to my old plates, which I am still using. Now, if any of your readers wish to wet their plates before developing they are welcome to do so, but they should not blame the manufacturers if they get a good crop of pin holes.

An exhibition of more than usual merit is now under way at the store of the Louis H. Bien Company, 139 Stockton Street. Many

fine pictures are on view, and much attention has been attracted to the universal excellence of the prints. Many of the good things gathered by Oscar Maurer during his recent trip through Europe lend interest to the exhibition.

"Rotograph" paper is attracting much attention in the West, the energetic manner in which the Western agent, Max L. Shirsper is pushing it being responsible for considerable interest. Mr. Shirsper anticipates being able to show San Franciscans the result of the recent \$650 prize contest of the Rotograph Company, recently decided, within the next few months. As the chief prize winner was Oscar Maurer, a San Franciscan, the interest in the exhibition will be great.

TRIAL EXPOSURES

When enlarging from a negative or positive for the first time, one does not want to waste several large sheets of bromide paper, says a writer in the *British Amateur Photographer*, or a number of large plates, to discover what exposure is the correct one. For the sake of economy and time, therefore, it is desirable only to use one sheet or plate, as the case may be, and to expose in strips. This is done by first drawing the dark slide containing the sensitized paper to its full length, then make an exposure of, say, five seconds. Now move the shutter of the slide in one inch and expose another five seconds, and so on till the dark slide is closed. By this means successive strips of paper receive exposures of five, ten, fifteen, etc., seconds, and, on development, the correctly exposed piece will be noted.

It is advisable to mark one end of the plate or bromide paper before putting it into the slide, and so recognize which end has received the first exposure. This may save developing all the strips.

USE FOR OLD BOOKS

Catalogues, time-tables, etc., accumulate beyond bounds in a year's time, and are often pitched away in a heap by the bosses during the spring cleaning, says *Photographic News*. Amateurs may find a capital use for them when mounting dry prints, especially enameled ones. Take one of these old catalogues, open to a clean page; lay the photo face down on this; hold it down at one end firmly with the left hand, and with the right apply the mounting brush freely, taking care not to let the print slip or it may get smeared. Take up the print; turn over to

another clean page; place the mount on this; then the photo in position; put the preceding clean page over it and rub down with the flattened fingers or the ball of the hand. In this way you have always a clean piece of paper ready on which to lay the print while pasting it, and also a clean sheet to rub it down on the mount with, and so there is no fear of smearing the print. By using the same piece of paper several times—for old catalogues are so cheap that you can afford to use a clean page for every photo you mount, and need not feel that you are extravagant; in fact, do not be tempted to use the same leaf twice—you can mount a dozen cabinets very speedily and neatly in this way, and use the old book till its leaves are done with.

DEVELOPING BROMIDE PRINTS

In a recent article in the *Photogram*, Mr. Alfred Watkins advocates the application of his "time development" method to bromide prints. He maintains that the quality of a bromide print as to hardness or softness is more a question of exposure and development than of the brand of paper, and that by varying these factors various kinds of papers may be made to give identical prints. This contention he supported by exhibiting at the Royal Photographic Society six prints of one subject, made on six quite different brands of bromide paper, and yet practically uniform in quality. The method employed by Mr. Watkins was to use a metol hydrochinon developer. The time of the first appearance of the image was noted, and this number multiplied by four gave the proper period for development. If this gave not the desired result, the exposure time was varied until it did. By thus standardizing the development there remains only one variable factor, namely, the exposure.

The following notice has been received from Mr. W. O. Bacon:

Your attention is called to the fact that, about January 28th, my business address will be changed from No. 20 to No. 300 Post Street, northwest corner of Stockton, in the Pacific-Union Club building.

This change is made necessary owing to the need of more room to handle the increased trade, and also greater storage facilities.

Orders received by telephone will be given our prompt and careful attention, and the instrument will be placed where it will be convenient for the use of our customers.

Thanking you for your kind patronage in the past, and trusting to be favored with your further orders in the future, I remain, Very truly yours, WILLIAM O. BACON.

The following directions (writes A. A. MacDonald in *Photographic Scraps*), if carefully followed, will enable workers to successfully strip the gelatine film from its glass support when the glass has been accidentally broken; to transfer it to another glass when a reversed negative is required, or to produce a film negative which can be printed from either side.

Sometimes a valuable negative gets cracked, probably in the printing frame, while the film remains intact. In such cases the negative should be first carefully placed on a piece of glass the same size as the negative, to prevent the film from being broken or strained along the line or lines of the broken glass. A little of any cement which may be at hand should be previously spread on the supporting glass, or, failing this, if the glass be slightly dampened with water the negative will cling to it.

The negative should then be coated with an enamel or a plain collodion. It should be placed level and the collodion flowed on, or the collodion may be poured in a pool on the negative held in the hand, and slanted until the whole surface is covered, the superfluous collodion being drained off at one corner. In addition to strengthening the film, this also prevents its lateral expansion in the subsequent operations and keeps it absolutely to its original size, which is often of very great importance. When the collodion is dry, which takes a very short time, the plate should lie on a level place and a solution of gelatine (about thirty grains of gelatine dissolved in each ounce of water) be flowed over it. This solution is easier to use at a temperature of about 100° Fahr., and may be helped to flow over the plate with the fingertip. When the gelatine has set, the plate should be dried in a place free from dust; this will take about a day. The coating of gelatine further strengthens the film, and also gives an equal tension on each side of the collodion, which prevents it from curling when it has been stripped from the glass. When the plate is dry it should be placed in a solution of chrome alum (one grain of chrome alum to each ounce of water) for at least ten minutes, and then washed for a few minutes. It should then be placed in a solution of a few drops of hydrofluoric acid to each ounce of water, which, acting on the glass, will soon release the film from it. A little help with a small brush will expedite this. As the hydrofluoric acid acts on glass

or porcelain trays, ebonite or papier mache should be used.

The glass should be removed from the dish, the film washed by soaking in several changes of water, when it will be ready for its new support, which should be a glass of a size larger than the film and have a coating of gelatine. An undeveloped plate, which has been only fixed and washed, forms an ideal support.

This plate should be placed in a fairly large dish with plenty of water, and sponged under the water to free it from air bells. The film should also be sponged, and film and plate be brought into contact under the water, and withdrawn together, the film being held in its place by only one edge until it is drained. Of course, care must be taken to place the right side of the film toward the glass, unless a reversed negative is required. Air bells may be detected as glistening spots when looked at through the glass. If there are any they may be pressed out with the finger, but, if some remain, the film must be floated off, glass and film be again sponged and the process repeated. When the negative is dry it should be quite as perfect as it was in its original state. The extra thickness of the film does not soften the lines of the picture to any appreciable extent.

If the negative has been varnished, the varnish must be removed before beginning any of the operations. In the case of a spirit varnish, the plate should be soaked in at least two changes of methylated spirit and rubbed with a pad of cotton wool. Other varnishes will necessitate the use of their respective solvents.

As hydrofluoric acid must be kept in an india-rubber bottle, it may be convenient to use either the fluoride of sodium or potassium instead. A few grains of either of these salts are dissolved in each ounce of water, and a few drops of almost any acid added just before the negative is put in. This will liberate enough hydrofluoric acid to strip the film. Great care must be taken of the hands when working with hydrofluoric acid.

A GOOD CHANCE

Any of our readers having extra-fine negatives of interesting subjects, made with lenses manufactured by the Bausch & Lomb Optical Company, Rochester, N. Y., would do well to communicate with them, stating size of negative and subject of picture; or, better still,

send a specimen print on approval, as a new catalogue is in preparation and the company desires to secure as large a variety as possible of photographs illustrating the special advantages of their different series of lenses. Kindly write or send prints at once as the catalogue is now well under way. Address Advertising Department, Bausch & Lomb Optical Company, Rochester, N. Y.

ENLARGED NEGATIVES

C. Ray Woods, in the *British Journal of Photography*, advises that each negative be made in two equal stages, the final negative being as large again as the enlarged positive. Mr. Woods gives a number of formulæ for fixing the various ratios of enlargement. Of these, the one for doubling the size is very simple, namely, to take any two points on the picture to be enlarged, using the distance between them as the side of a square. The diagonal of this square is the distance these points should appear apart on the enlarging screen.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

220 SUTTER STREET, SAN FRANCISCO

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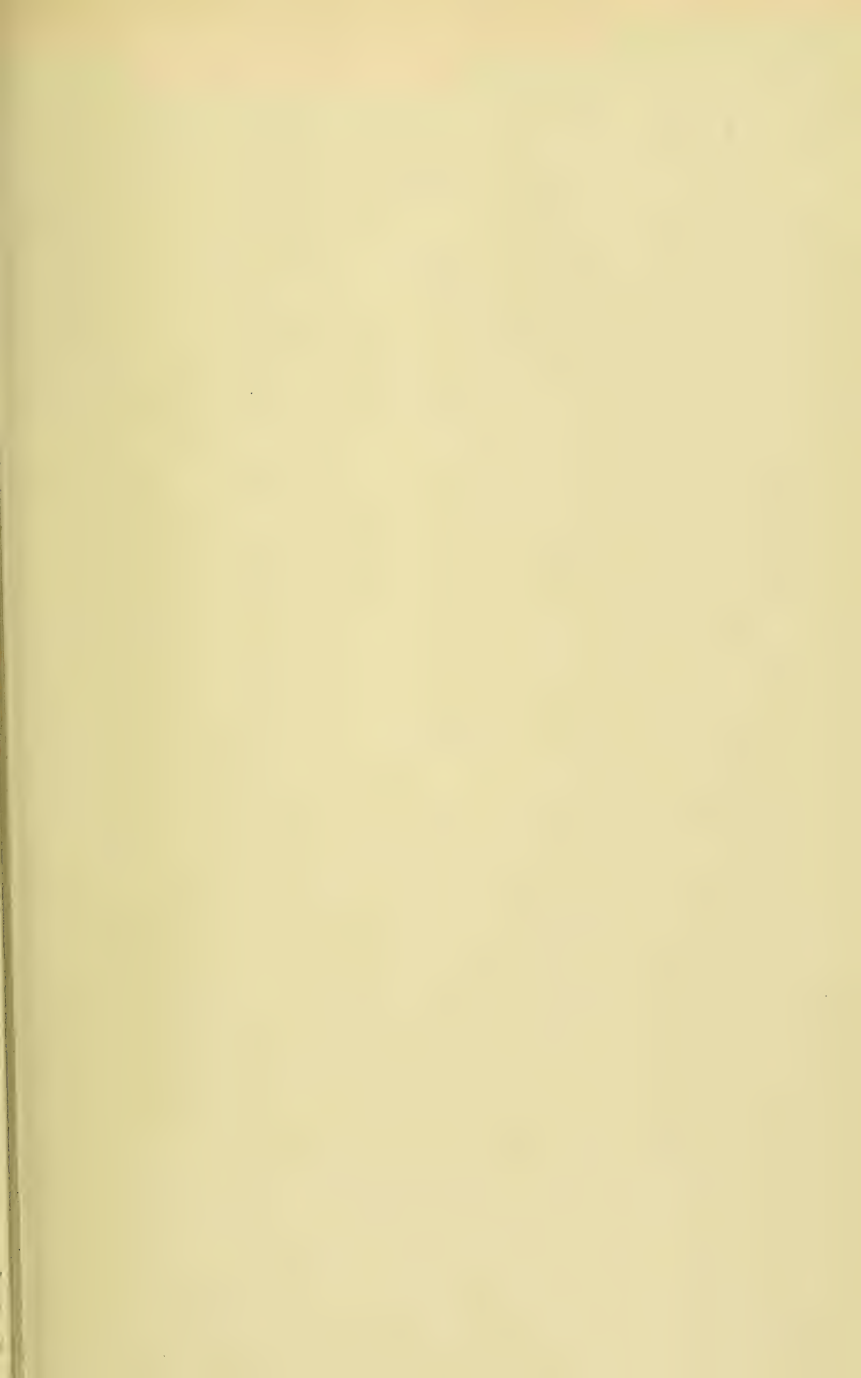
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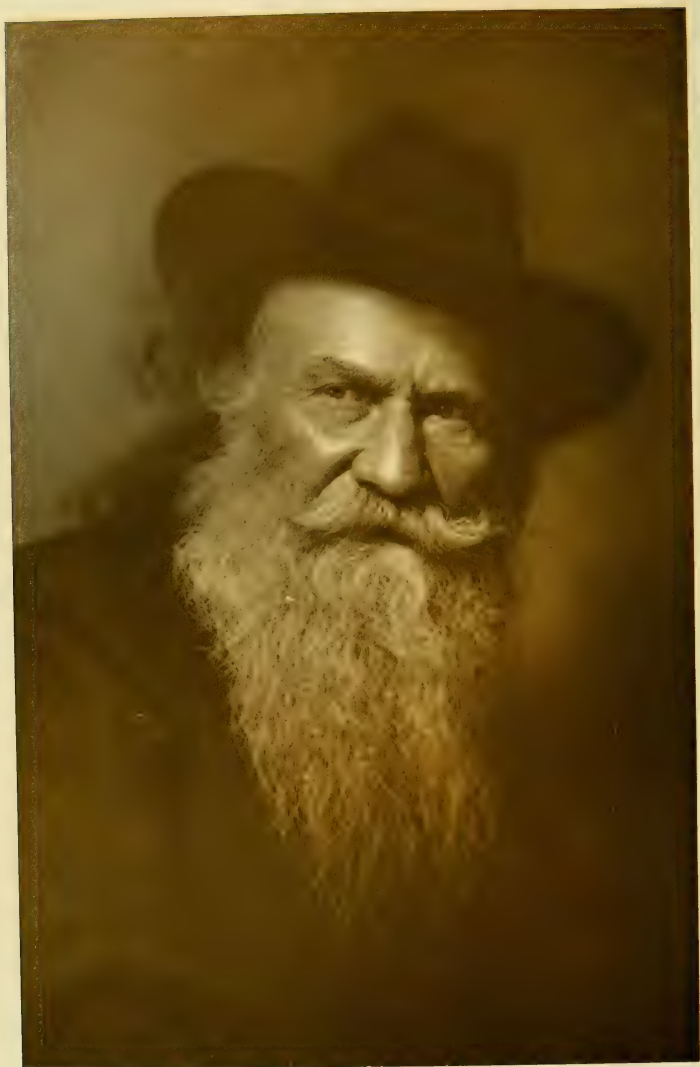
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JOAQUIN MILLER
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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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SAN FRANCISCO, CALIFORNIA, MARCH, 1902

No. 5

GEORGE WILCOX—HIS WORK AND AMBITIONS

BY CARL E. ACKERMAN

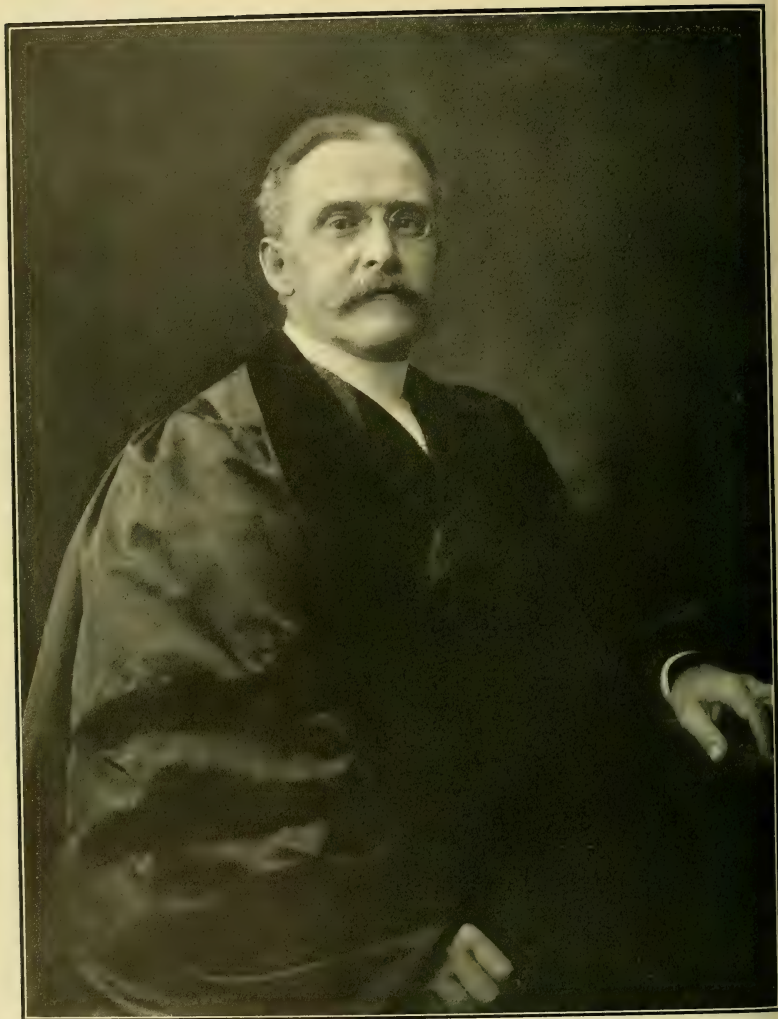
ILLUSTRATED WITH A NUMBER OF NEW PICTURES

"If a picture is to express truth and individuality, every step in its conception must be performed by one man," said Mr. Wilcox, in answer to my query as to his ideas upon the modern portrait photographer. Mr. Wilcox has recently established a studio on Sutter Street, in San Francisco, after eight years of serious work in the staid college atmosphere of Berkeley, where most of the famous men of the State appeared before his camera. And in response to a feeling of curiosity as to his aim in moving from the classic city across the bay to the hurly-burly of San Francisco I called upon him.

"I do not believe," continued he, "that it is possible for a photographer to portray the inner as well as the outer man, the strength and character of the individual, unless his personal attention is given to every detail in the preparation of the picture. For that reason I employ no subordinates, and, therefore, have the knowledge and feeling, after completing a picture, that it is all mine. Many photographers firmly believe that it takes more study and gray matter to become a painter than a successful photographer. My opinion is directly the reverse. The limitations surrounding the man with the camera are such as to make it necessary for him to exercise more thought and knowledge in making a good picture than the painter."

Before embarking upon the sea of Photography, some fifteen years since, Mr. Wilcox had a number of years of art training, and it shows in his work today. His compositions, in many respects, are unique, and the very fact that his work can be compared to that of no other photographer in the West is an indication that it will not be many years before his name becomes known throughout the country.

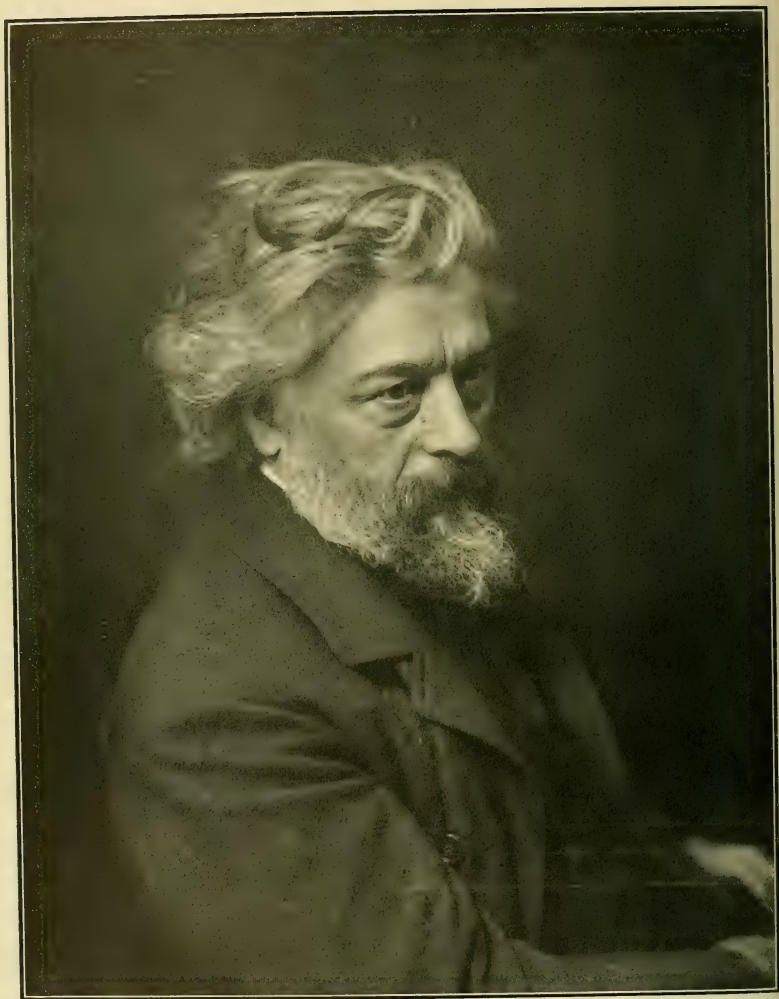
Associated with Mr. Wilcox is Mrs. Robeson, at one time a well-known amateur. Mrs. Robeson gives all of her attention to photographing women, for which she has a great liking. With this article a number of recent pictures by Mr. Wilcox are reproduced. They are representative of his methods, and even in the reproductions the vigorous character of his subjects stand out prominently. He seems to possess the ability to clothe his subjects with dignity and repose, and, in consequence, the pictures have a peculiar interest and attraction to those who are acquainted with the well-known men whose faces are now presented.



BENJ. IDE WHEELER
by GEORGE WILCOX



THE END OF THE STORY
by GEORGE WILCOX



WILLIAM KEITH
by GEORGE WILCOX



ROSES
by GEORGE WILCON



PORTRAIT
by GEORGE WILCOX

PLATES AND LIGHT-FILTERS FOR ORTHO- CHROMATIC AND TRI-COLOR PHOTOGRAPHY*

BY DR. ADOLF MIETHE, HON. F. R. P. S., PROFESSOR OF PHOTO-
CHEMISTRY IN THE CHARLOTTENBURG TECHNISCHE
HOCHSCHULE.

THIS SERIES OF ARTICLES WAS PREPARED BY DR. MIETHE ESPECIALLY FOR "CAMERA CRAFT" AND
"PHOTOGRAM," AND IS FULLY PROTECTED BY COPYRIGHT IN BOTH THE UNITED STATES AND ENGLAND.

In commencing these articles on the photography of colored objects in monochrome and in natural colors, I feel that I do so not because what I have to say is new, but in order to emphasize those practical methods which, in my own work of the last year or two, I have found to be the best, and, in referring to the minor improvements which I have myself introduced, to stimulate others to more productive experiments. In some countries — Germany, for example — color-sensitive plates are the rule rather than the exception for landscape work. I should say that seventy-five per cent of the landscape exposures in Germany are made on orthochromatic plates, a proportion which, so far as I know, is not reached in other countries — to the detriment of the results, I think. But the mere use of a color-sensitive plate is scarcely any guarantee that the results will be any better than with ordinary plates. Though capable of giving finer and more varied results, orthochromatic plates are easier to use wrongly than are ordinary plates. An ordinary and iso plate must not be used alike. That they are frequently so used is the reason for much of the prejudice against the orthochromatic plate. To understand how to use the latter correctly, let us first grasp certain central facts and then pass to their practical application.

First of all, let us recollect that the sensitiveness of our eye is very different for different colors. The eye sees the colors of the spectrum (such as is obtained through a diffraction grating) in various brilliancies. In the extreme red, where the rays of longest wave-length become visible, the sensitiveness of the eye is extremely slight, although the Bolometer — that remarkable instrument of Professor Langley, which measures directly the mechanical energy of light rays — proves that in this region lies the maximum intensity of the radiant energy. Toward the yellow part of the spectrum the sensitiveness of the eye increases enormously. Rising rapidly, the curve of sensitiveness reaches a maximum in the neighborhood of the yellow sodium line of wave-length 589. It then sinks, first slowly, then more rapidly, to a very small value in the green and violet portions.

It is very remarkable that this curve of sensitiveness is not the same in all intensities of light. As the light becomes weaker, this maximum moves from the yellow toward the green part of the spectrum, and finally, as the light becomes extremely weak, the whole "curve of intensities of the color-sensitiveness of the eye" ("Farbenwahrnehmungsintensitätskurve") shrinks down to a small heap in

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the green (Purkinje's phenomenon); from this it follows that in very weak light we have scarcely any sense of color. Red and blue, orange and blue-green, almost entirely disappear. The only recognizable coloring is that of a uniform green, a fact which any one can confirm on a moonlight night; then, a roof of red tiles appears almost black, while green fields appear comparatively bright.

If we wish to reproduce a colored painting in monochrome we must reproduce colors which appear bright to our eyes by bright tones, those which appear dark by dark tones. Cinnabar red, lemon, yellow and yellowish green affect our eye greatly; blue and violet, however, very slightly.

The ordinary gelatine plate, on the other hand, behaves quite differently in this respect. Its curve of sensitiveness is of the same form as that of the eye; it rises quickly from nothing in the less refrangible part of the spectrum, reaches a maximum, and then falls slowly again to the more refrangible end. But while the maximum of the eye's sensitiveness lies near the wave-length, $589 \mu\mu$, the maximum of the dry plates lies appreciably further toward the more refrangible part of the spectrum; its average position is about $460 \mu\mu$. The curve itself runs far into the refrangible part of the spectrum, so that the photographic action extends far beyond the visible violet into the ultra-violet. Indeed, under certain favorable conditions the sensitiveness of the plate can be shown to have appreciable magnitude even for waves of the extremely short length of $100 \mu\mu$.

Two reasons are given for the fact that the eye cannot recognize deep violet and ultra-violet. One is that the nerve fibres of the retina are not set in vibration by such short waves. The other, and far more probable reason, is that the short waves are completely absorbed by the crystalline lens of the eye and its aqueous liquid. This latter view gains strength from the fact that persons who have lost the crystalline lens of the eye, in an operation for cataract, for example, and have thus been deprived of the most strongly absorbent part of the fluid of the eye, are able to see far into the ultra-violet.

Fig. 2 gives the curve of sensitiveness of an average photographic dry plate. It should be mentioned that by long exposures this curve can be further prolonged toward the red end of the spectrum. If, when photographing the spectrum, care be taken to exclude all more refrangible light by a suitable filter, and an ordinary plate be exposed for one hundred or one thousand times as long as is necessary to allow the blue light to impress it, then a weak light action in the yellow, orange red, and even in the red part of the spectrum, is produced. One might suppose from this experiment that it is only necessary to give a long enough exposure in order to be able to photograph the less refrangible part of the spectrum, and one might further conclude that this property of the plate might be used in practice by giving increased exposure and using a light-filter to cut out the rays at the blue end of the spectrum, thus permitting of the effective action of the less refrangible light. Yet these conclusions are incorrect. Even though fairly correct reproduction of colored objects, as regards tone and values, may be obtained on ordinary plates with a very long exposure through a, say, yellow filter, yet the effect is due less to the direct action of the red and yellow light than to the slight proportion of refrangible light reflected from all pigments. A very weak image is obtained in the spectrograph of the red and yellow parts of the spectrum, but it remains weak. It seems likely that among the many thousand particles of sensitive silver bromide in the gelatine film are a few separate ones

possessing a slight sensitiveness to the less refrangible rays, and which are, therefore, actually affected by these rays.

The merit of having, on the one hand, clearly grasped this fact, and, on the other, of having found the practical means to avoid the defects arising from it in photographic work, rests with the late Dr. H. W. Vogel, who, more than twenty years ago, discovered that the sensitiveness of a silver bromide emulsion to the most refrangible rays can be developed by the addition of certain coloring matters.

The fundamental principle laid down by Vogel at that time can still be regarded as substantially correct. It affirms that a light-sensitive substance is affected by those rays which it absorbs. Ordinary silver bromide absorbs blue-violet light chiefly, and is, therefore, affected by these rays. On dyeing it suitably more or less increased sensitiveness to the kind of rays absorbed by the coloring matter is usually imparted to it. If this effect does not take place, it generally turns out that the grains of silver bromide cannot be actually dyed by the coloring matter in question. Anomalies in the use of "sensitizers," as these dyes are called, can be explained also by the shifting of the absorption bands of the respective coloring bodies when dissolved in silver bromide.

Since the index of refraction of silver bromide is so very high, the photographic action is generally to be looked for further toward the less refrangible part of the spectrum than would be supposed from the position of the absorption bands when the dye is dissolved in water or alcohol. Thus, as a rule,

Yellow dyes sensitize for blue-green.

Red dyes sensitize for green.

Blue dyes sensitize for orange and red.

The color sensitiveness produced by different dyes is very various. While certain dyes of the eosin group can render silver bromide almost as sensitive to yellowish green as to blue, most coloring matters have only a slight action; many, despite their apparent suitability, are practically useless.

There are two methods of preparing color-sensitive plates—the addition of dye to the emulsion, which gives fairly good results; or by bathing, which, when properly carried out, is the most efficient, and permits of the preparation of extremely rapid plates.

The spectrograph is the instrument par excellence with which to study the color-sensitiveness of plates. Testing their properties by means of pigments and color charts is possible only when the operator is perfectly at home with his materials and knows the spectral composition of his pigment colors. In the use of the prism-spectrograph regard must be paid to the fact that its dispersion of the different parts of the spectrum is very different—ten times more in the violet than in the red. Hence, when using an instrument of this kind the color action in the less refrangible parts of the spectrum is greatly emphasized, and false conclusions as to color sensitiveness may frequently be traced to neglect of this fact.

Before passing to the use of color-sensitive plates, I should like to describe some methods of preparation. Setting aside the manufacturing process of adding dye to the emulsion, we will confine our attention to the bathing process, which, as I have already said, gives the best results. One of two methods is recommended, according as we wish to use the plates only for general orthochromatic

work or for tri-color photography, such as for transparencies in natural colors or three-color printing. In ordinary work, such as landscapes and copying from not too highly colored originals, plates possessing considerable sensitiveness to yellow and green are sufficient. For tri-color work in its various branches an additional sensitiveness to the red must exist.

Color-sensitizing by bathing entails two separate operations — (1) dyeing the plate and (2) washing out the superfluous dye. This latter process has hitherto had little attention devoted to it, though it is of the very greatest importance, as the thorough removal of the dye considerably increases the time during which the plates will keep in good condition, and it also extends the region of color-sensitiveness as well as raises the sensitiveness of the plate to this part of the spectrum. The reason of these facts cannot be gone into here, though it is easy to show that on theoretical grounds it is right to color only the silver bromide and to have the gelatine as far as possible unstained, and this theoretical opinion is completely borne out in practice.

I will now give the practical details for preparing yellow and green sensitive plates of extreme sensitiveness and density-giving properties, such as are required in landscapes and portrait work, and especially for use by artificial light. Plates sensitized as described are many times more sensitive than the unbathed plates.

A square glass trough, similar to those used for accumulators, is the most convenient vessel for containing the bathing solution. A rack of stout nickel wire, corrugations which are of india-rubber, serves to hold the plates. The distance between each plate must be at least half an inch (12 mm).

To make the sensitizing liquid, the following stock solution is first prepared: Tetra-iodo-fluorescëin, *i. e.*, Erythrosin of the Actien-Gesellschaft für Anilinfabrikation, Berlin, is dissolved in alcohol, as follows:

Erythrosin	35 grains,	1 gram
Alcohol (96 per cent)	40 ounces (fl.)	500 c.cs.

One part of this stock solution is diluted with fifteen parts of distilled water and one per cent (*i. e.*, four drops per fl. ounce) of strong ammonia added. The solution is then carefully filtered through paper and poured into the glass trough. A similar trough is filled with a solution of strong ammonia (one part) in water (one hundred parts). The plates are dusted, placed in the rack and immersed for two minutes in the ammonia solution. They are then transferred without rinsing to the erythrosin bath, which should likewise be allowed to act for two minutes. Lastly, they are placed in a third vessel of clean water for three or four minutes, during which time water from the tap is allowed to run in. All these operations must, of course, be performed in weak light — best in total darkness, or by the red safe-light which I shall describe later on. The ordinary ruby light is certain to produce fog within a short time.

The bathed plates are set on a rack and dried in a cupboard of ample size, either by means of a tray filled with calcium chloride or with the aid of an ordinary electric fan. Drying should not take longer than six or eight hours. Plates prepared in this way keep in good condition for at least three months. Their general rapidity is very high, and they possess such marked sensitiveness to the green that they are very suitable for all ordinary purposes, especially

landscape, without a yellow light-filter. It is scarcely necessary to say the original emulsion influences the final result. The best orthochromatic plate is obtained by taking a medium or extra-rapid plate without tendency toward fog or excessive density.

Red sensitiveness in a plate is absolutely necessary in reproduction of paintings, and in photography in natural colors. A stock solution of cyanin is prepared. The proper dye is chinolin blue, made by the Actien-Gesellschaft für Anilinfabrikation, Berlin:

Chinolin blue.....	35 grains,	1 gram
Alcohol.....	40 ounces (fl.)	500 c.c.s.

The sensitizing bath is now made as follows:

Alcohol (96 per cent).....	25 ounces	1000 c.c.s.
Cyanin solution.....	$\frac{1}{2}$ ounce	20 c.c.s.
Water.....	100 ounces	4000 c.c.s.
Erythrosin solution.....	$6\frac{1}{4}$ ounces	250 c.c.s.

It is very important to stir the cyanin solution thoroughly with the alcohol, and to then add the water gradually; otherwise it is easy to throw part of the cyanin out of solution. If the filter paper becomes strongly blue when the bath is filtered, the cyanin has probably been precipitated from this cause. If it cannot be avoided, the only remedy is to increase the proportion of alcohol. Methyl-alcohol should not be used; better, absolutely pure high-strength ethyl-alcohol.

Shortly before use, one per cent of strong ammonia is added as prescribed above for erythrosin pure and simple. The preliminary bath of ammonia is, however, omitted, and, in view of the large percentage of alcohol in the solution, the washing must be rather longer, say, for five or six minutes altogether. Longer washing is no disadvantage, however.

The plates must be sensitized and washed in complete darkness. In a dry state they keep in perfect condition for at least three months. Their sensitiveness to green and yellow is less than that of those prepared as above, but their red sensitiveness is considerable. With a pale yellow light-filter they give excellent results in landscape work and in copying paintings. For more highly colored objects an orange-red filter—of which details in a further article—should be used. I ought to note that all color-sensitive plates of good keeping properties should be packed film to film one or two days after preparation. They should be stored in a dry but not too warm place.

Even the best color-sensitive plates give incorrect color values compared with the effect seen by the eye. In other words, colors are reproduced by them in monochrome, so as to give a very different effect, as regards relative brilliancy, from the original. The eye is far more sensitive to the yellow than to the blue, so much so that even when we have produced the plate described before, with sensitiveness to yellow as great, or greater, than to blue, we have not done all that is necessary. If the sensitiveness of the orthochromatic plate is studied by means of an ordinary prism spectroscope (or spectrograph) a curious difference between theory and practice is noticed. For example, the erythrosin plate already described appears much more sensitive in the green near the D line than in the blue; in fact, with short exposure only the yellowish green of the spectrum appears.

Now, in practice it is found that on photographing, say, a chart of colors, yellow comes out almost as bright as a medium bright blue, which looks very much darker to the eye. There are several reasons for this difference. First, the spectrum produced by a prism is shortened in the less refrangible part and immensely lengthened out at the more refrangible end. The red and yellow parts are crowded together; the blue portion is spread out in a long band. In fact, the dispersion of an ordinary prism is only one-tenth near the D (wave length, 589) of what it is in the violet (wave length, 400). The diffraction grating acts very differently. When properly arranged it disperses light of all wave length in exactly the same degree, but, unfortunately, the separate regions of the diffraction spectrum are almost always unequal in brightness. Two gratings can never be found which behave similarly in reproducing the brightness of the different parts of the spectrum. Some parts will be extra bright, others very weak or entirely absent. For this reason the small commercial diffraction spectrographs should not be used in making photographic tests, for the results obtained with different instruments are never comparable. As is well known, the reason of this important phenomenon is the shape of the line of the grating. Not only are separate spectra of different order right and left of the chief spectrum of different brightness, but the separate areas of the spectra differ enormously in their relative brightness.

A further cause of the discrepancy between the action of a plate in the camera and its spectrographic effect is the fact that pigments or the coloring matters of natural substances are never pure spectrum colors. For example, a patch of luminous yellow pigment—say chrome yellow—examined in the spectroscope is seen to reflect nearly all the red, much green and some blue, in addition to yellow. Similarly, colors which are almost indistinguishable to the eye, such as chrome yellow, cadmium yellow and gamboge, are very different as regards spectral composition. Patches of chrome yellow and cadmium yellow of exactly equal brightness to the eye do not photograph alike. The cadmium yellow appears much darker than the chrome yellow, as it is much less active as regards spectral composition and reflects much less blue light.

From these two reasons it follows that the orthochromatic action even of a good bathed plate, which seems perfectly satisfactory in the spectrograph, is not correct in practice. With ordinary erythrosin plates pure red appears as black, yellow not much brighter and very much darker than blue of medium shade. These defects must be corrected by means of a light-filter or color-screen, which is always necessary if a proper color effect—the correct reproduction of the tone values of the separate colors—is to be obtained. In order to make tests for himself, the photographer should provide himself with a color chart, which he can easily extemporize from bits of colored papers pasted to a card. But most bright-colored papers bleach in a short time and soon get dirty, so that for continual use it is best to make a chart from oil colors, which are permanent and cannot get soiled. In my own work I proceed as follows: I lay strips of paper at right angles across and across one another, so as to form twelve square patches between them. I paint each of these patches with an oil color (obtained in tube from the artists' dealer) and place the chart in a printing frame for use, photographing the pigments through the glass. The twelve patches are arranged in three rows of four each, and consist of the following pigments:

Series 1—White lead; white lead with a very little Prussian blue; white lead and Prussian blue in equal parts; white lead and ultramarine.

Series 2—Chrome yellow; chrome yellow plus mixed chrome green; chrome yellow with cinnabar; cinnabar.

Series 3—Madder carmine plus white; yellow chrome; madder carmine and cobalt blue; madder carmine with white and mixed chrome green.

Such a chart contains the principal colors and lasts a very long time if the paints are allowed to dry perfectly and the glass bound up with another, lantern-slide fashion. It greatly simplifies the practice of orthochromatic photography, especially as regards the proper selection of a light-filter for the getting of proper reproduction of color values.

Photographed on an ordinary plate, the white, bright blue and blue patches and the colors containing carmine come out rather dark. Yellowish green and cinnabar give clear glass. On the erythrosin plate the yellow gives a dense patch, green medium density, while cinnabar red is faintly perceptible. With the erythrosin-cyanin plates described in the last article, the cinnabar red appears appreciably darker.

In order to reproduce the color effects in shades of black proportional to the brilliancies of the colors as the eye sees them, the effect of the blue must be lessened and that of the yellow and green intensified. A yellow light-filter does this and is not difficult to make. Many yellow screens of commerce, especially those made from colored glass, are very inefficient. They stop a large proportion of the blue light, it is true, but they also keep back green and yellow to a considerable extent and greatly prolong the exposure. Light-filters are easily made by means of dyed varnish or collodion, but the best method, though one requiring a little more skill, is to apply a colored film of gelatine to a glass plate. Screens made in this way possess the advantage that any exact tint can be repeated, while varnish or collodion films turn out differently every time. The following method of preparation gives the very best results: The glass should be absolutely flat plate glass, free from defects and not too thin. For filters up to two and a half inches diameter the glass must not be thinner than one-fifth of an inch—*i. e.*, about seven-thirty-seconds of an inch—in order that there may be no doubt about the parallelism of the two surfaces. In order to select those parallel-sided from a large sheet, the latter is laid on a dark-colored surface and viewed obliquely at some distance. Those parts of the plate in which one single-reflected image is seen—*i. e.*, in which the images from the back and front of the glass coincide—are perfect as regards parallelism and are selected for screen making. They are cut up to the size required and carefully cleaned by soaking for a couple of hours in a bath of nitric acid, being then cleaned up with a mixture of ammonia and chalk. The coating solution prepared from gelatine, the most transparent procurable—the half-opaque emulsion gelatine is useless—which is swollen in seven or eight times its weight of cold water, liquefied by warming on a water bath.

It is filtered through a hot-water funnel, passing rapidly through the paper when in a warm condition. The coloring matter, of which later, is now added, and the exact volume of solution for a given size of plate carefully measured out and poured on to the glass. This latter should previously have been warmed on an iron plate exactly level and gently heated by a rose gas burner

underneath. The solution having been allowed to spread over, the plates are left to set, and are now first placed vertically, so as to prevent dust settling on them, and dried in a room at a uniform temperature. They must now be provided with a cover glass, for which a stout glass plate, likewise parallel-sided, is used. The coated plate is brought on to some support carefully warmed to 120° Fahr., a few drops of Canada balsam poured on and the warmed cover glass laid very slowly on. The temperature of the support is now gently raised to 120° Fahr., and the Canada balsam gradually spreads itself between the two glasses, the excess escaping at the edges. The temperature is now reduced to 105° — 120° Fahr. and the superfluous balsam cleaned away with xylol. The finished filters are then bound with paper edging and are ready for use.

The proper function of a light-filter is to weaken the strongly refrangible colors without reducing the intensity of the less refrangible rays. As mentioned above, body colored glasses are absolutely useless. There are two kinds of yellow glass on the market. One is called "holz-glas," *i. e.*, colored carbon; the other is colored with silver chloride. The former is usually a thick "pot-metal" glass, *i. e.*, colored right through; the latter is flashed, *i. e.*, has only a thin film on one or both sides. The silver glass is certainly of purer color than the "holz-glas," but for photographic purposes is even less suitable. It reduces yellow and red very considerably, though much less than does the absolutely unusable "holz-glas."

For the coloring of the gelatine solution there are a large number of artificial dyes which are practically permanent and extremely pure in color. The best of all is tartrazin, next to that, brilliant yellow. The purest form of tartrazin is that of the Badische Anilin and Soda Fabrik, which is extremely luminous and as soluble as necessary. A one-per-cent solution is prepared and added to a measured volume of the gelatine solution, in quantity suitable for giving the correct densities with the particular plate in use.

A practical test for depth is necessary and must be repeated whenever a new sample of dye is taken, for the coloring power of different batches is not the same. In making the test a number of light-filters should be used, containing different but known proportions of tartrazin, exposures being made on the color chart above described. With the erythrosin plates these yellow screens give excellent reproductions of all colors save red, which, even with a deep tartrazin screen, acts much too weakly, owing to the insensitiveness of the erythrosin plates to the red of the spectrum. With a screen of the right depth and sufficiently short exposure the dark blue of the chart should be black, and the chrome yellow clear glass, in the negative.

For the panchromatic plate, the formula of which was given on a former page, these tartrazin filters are not sufficient. In order to obtain proper reproduction of color values with these plates we must let the red have its effect, and this requires a filter tending to orange. Such a panchromatic filter is obtained by adding some red dye to the tartrazin-gelatine solution. The red dye must have its absorptive properties very nicely adjusted. Most clear red dyes possess an absorption spectrum with strong bands in the green, *i. e.*, they absorb certain green rays and cannot, therefore, be properly used for filters. Among the azo dyes, however, are some red coloring matters free from this

characteristic, and, therefore, very suitable for panchromatic filters. The so-called genuine red (*echtes Rot*) of the Farbenfabriken, vorm Friedr Bayer & Co., Elberfeld, Germany, best fulfils the conditions. It is used in the proportion of one to one and a half parts to every ten parts of tartrazin. The solutions of the two dyes are mixed and added to the gelatine solution. With this filter and the panchromatic plate prepared from cyanin and erythrosin a perfectly correct reproduction of color values is obtained, and one can do reproduction and landscape work possessing great perfection of tone. For copying oil paintings especially, an impossible performance on ordinary plates, this combination of filter and plates works perfectly.

As the yellow light-filter is bound to prolong exposure in all cases, it cannot be used with extremely rapid shutters, but with a proper filter and an erythrosin-ammonia plate, fairly rapid instantaneous work can easily be done. For example, I have myself made some extremely short exposures when photographing from a balloon, with the most excellent results as regards rendering of detail and distance. In mountain photography and in open landscapes with strong foreground, seascapes, and, most of all, in cloud studies, this combination of plate and screen gives the finest results. Exposure need not run to the length necessary when the usual screens are used, so that, with a large aperture, one can habitually snapshot with the screen *in situ*. The difference between the results obtained in this way and those on ordinary plates is simply surprising. The advantage is still more marked when much green enters into the subjects. Woodland scenes on erythrosin plates and yellow screen need less exposure than on ordinary plates and the rendering is astonishingly better. The harmonious effect of the various tones becomes a very notable quality when the orthochromatic method is followed. Autumn scenes, flowers and still life, and paintings are, of course, all subjects for which the ordinary cannot be compared with the color-sensitive plate.

On the other hand, there are instances when the yellow screen is not a gain. One of the great charms of ordinary landscapes is the haze and blue-veiling of the distance. This is exaggerated by the ordinary plate, which thus imparts a sense of repose to the background of the picture and introduces the subtle charm of atmosphere into the negative. But the color-sensitive plate, used with the yellow screen, defines sharply right back into the distance. A distant mountain peak, which appears on an ordinary plate as one uniform tone, is reproduced on the screened orthochromatic plate with almost an exaggerated rendering of its various tones, and the pictorial effect of the whole scene may suffer appreciably.

The panchromatic plate is specially of service for the reproduction of oil paintings, carpets, highly-colored still-life studies, art objects and scientific subjects. For example, it is eminently suitable for photographing, under the microscope, such objects as stained preparations of bacteria, histological subjects and objects under polarized light. The exposures with this plate and its proper panchromatic filter must necessarily be much longer—thirty to forty times as long—than with ordinary plates.

In my next article I shall turn to practical methods of making photographs in natural colors, speaking of my own experience during the last year or two, especially as regards portrait and landscape work direct in natural colors.

(To be continued.)

STRAY BITS OF ADVICE FOR THE BEGINNER AT LANDSCAPE

BY W. J. PIATT

ILLUSTRATED BY THE WRITER

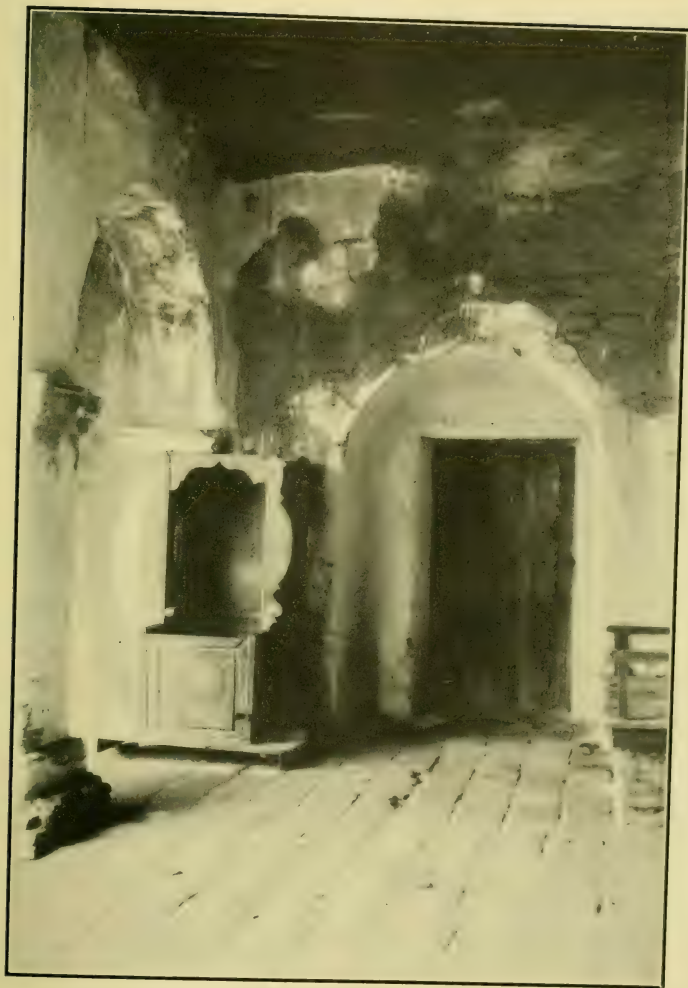
The first difficulty that confronts the beginner in Photography usually resolves itself into the question as to the best camera to buy, and, in consequence, the prospective photographer's friends are besieged for advice, which, once obtained, is promptly disregarded. But, for all that, the beginner gets just about the proper thing, for the reason that nearly all cameras are now constructed on similar lines and are all well adapted for the general uses of the amateur. This important matter settled, the average beginner follows the photographic manuals, and generally finds that he has surprised himself by making a good negative, better, perhaps, than he will make a month later, when self-confidence begins to appear, and he starts to depend upon his own resources and follows the guidebook less carefully.

Most people select a small camera to start with, and I would certainly advise this, unless you have an interest in the United States Treasury; also because it is much easier to carry around and manipulate.

After having photographed the baby or the dog or cat, and you desire to work more afield, then you begin to realize the scope of the camera and the value of composition, perspective and lighting. You will soon begin to talk learnedly of atmosphere and technique, but with it all you do not feel that you are always getting what you expected, and are somewhat disappointed that the black and white print does not have that luminous beauty that you saw on



RUINED MONASTERY OF ORIZABA



AN OLD CONFESSIONAL

your ground glass. Taking the colors of nature out of it seems to take away the very thing that appealed to you. This you will never entirely overcome but it will not disturb you later on. You have a remedy in carbon work and other methods that, should you care to go as far in Photography, will go far to relieve some choice subject from cold black and white.

In going out to take landscape negatives with a plate camera, never go without your tripod and focusing cloth. Where one picture is made by carelessly snapping away at everything that looks good, ten are made in carefully studying the different subjects and their possibilities when reduced to

monochromes. Walk around and study your subject from different points and never have the source of light coming from directly behind you, as there will be an entire absence of the modeling so necessary in a true picture of nature, such as you would obtain with the light on the quarter or side.

Different subjects require different lighting, and a little study will show you how important this is to obtain good results. Take, for instance, some one subject you like and try three negatives on it from three different directions at the same time of day, or from the same point at three hours apart during one day, and you will be surprised at the results. Light and shade require very careful handling in Photography as well as in other lines of art work.

Composition comes first to a beginner, because he can generally wait on an average subject and choose his lighting; but many times this may not be so, as accidental conditions, such as clouds, cattle or sheep, may largely determine the composition to suit the lighting. This will come to you very forcibly at times, when you want just a certain bit of foliage or water to reflect the images, or something else that you might desire, and you are disappointed that it is impossible to have it just as you would like. Remember the old adage of Mahomet and the mountain, and either bring your ingenuity into play to get them together to suit you, or give it up and go back again with help and better conditions. Always remember that one good negative is worth more to you than a whole collection of poor ones. In composition do not try to get in all you see with your eye. Many times you do not need it. Simplicity in Photography is just as necessary as in painting.

A beginner must learn the capacity of his lens and not expect impossibilities.



THE MISTY BAY



BROWSING

A little study in distances and elevations will be of great value when you come to quick shutter work with the guidance of a finder. Do not go up on a high hill and expect to see a beautiful landscape reproduced on your negative as your eye sees it, because you will be disappointed. Your eye is more accommodating than your lens, and objects that look large and clear to the eye will be mere specks on the ground glass; and many times some particular object may show plainly to the eye and, owing to atmospheric conditions, may not appear at all in the finished photograph.

A little practical advice from a friend who has been through these trials will be of great help. Study up a little on the simpler forms of composition and do not think you need go miles and miles to find artistic bits to photograph; they are very likely to be close at hand. Some years ago I had the misfortune to damage the bellows of my camera, and I patched it up with black court-plaster, but still was afraid it was not safe, so I thought that I would go to a professional photographer and have him develop the next plates I exposed. I went out the next morning and, seeing a herd of cattle in the trees lining the bank of a narrow stream, I made several exposures. The conditions were very favorable, as it was early morning and the light was not hard and glaring, and over all was a fine bank of clouds. The reflections of the cattle and clouds, as well as the trees on the opposite bank, helped to make the effect very pleasing, and I had strong hopes that I had succeeded in getting at least one good cattle study. I went to the gallery in town, as I knew the owner, and



THE RIVER

also knew him to be a very careful workman. I explained my situation regarding the bellows and asked him if he would develop the plates, and he said he would. I went away and came back in an hour or so, and he had them all developed and was holding one up to the light, looking at it. He turned to me—he was an enthusiast over landscape work—and told me that he only wished he had the opportunity of traveling around and getting such cattle subjects. I told him I got them within less than four hundred yards of where we stood, and had made the negatives not two hours before. You should have seen his look of disbelief. This only shows that we overlook at times the things close at hand for distant and many times less artistic subjects.

One more friendly bit of advice to the beginner. In landscape work use only the morning and evening light; do not work from 10:30 A. M. to 2:30 P. M. Lay away the camera during this time, as the light is too strong and the shadows too dense to handle for the beginner. When you have been at it longer you may do as well then as at other times; but as these bits of advice are devoted solely to the beginner, I think that they will prove valuable for the time being.

DISFIGURING ADVERTISEMENTS

Photographers are frequently annoyed to find that what would have been a fine landscape view is disfigured by an ugly advertisement of some soap, pills, ointment or other nostrum. This is not so annoying to the painter as to the photographer, as he can omit it in his picture, while the latter, perforce, must include it or forego the picture altogether. A society has been formed here to attempt to prevent the disfigurement of the landscape by obnoxious advertisements, but up to the present, as there is no law to meet the case, it has accomplished nothing. This advertisement disfigurement is not entirely confined to this country, although we think it had its origin here; if not, it had in America. It is with pleasure, therefore, that we see from a telegram from the Rhine Province that the District Governor had issued orders to all the town and district councils in the Rhine Province and the Moselle Valley to prohibit all advertisements being exhibited that would spoil the views of the landscapes.

—*British Journal of Photography.*



PORTRAIT
by GEORGE WILCOX



PORTRAIT OF MISS LAURA M. ADAMS
by ADELAIDE HANSCOM

DEPARTURE OF MISS LAURA M. ADAMS FROM THE LOCAL ART FIELD

WITH A PORTRAIT OF HER BY MISS ADELAIDE HANSCOM

The San Francisco photographic world is shortly to lose one of its most promising lights in the person of Miss Laura M. Adams, who has given up her studio in the Flood building to Miss Adelaide Hanscom of Berkeley. Miss Adams, during the two years she has been at work, gained a well-earned reputation for the originality of her compositions and the free grace and beauty of her portraits. Her series of portraits in the second San Francisco salon attracted much attention from the critics, who proclaimed it the best series on the walls. Miss Hanscom, who succeeds Miss Adams, has had long training as a portrait painter, and was for some time assistant instructor in the Saturday drawing class at the Mark Hopkins Institute of Art. She also held a position in the drawing department of the Berkeley public schools for several terms.

A number of portraits and marine studies exhibited by her at the Channing Club salon last year were favorably commented upon by the public and were awarded prizes by the board of judges.

Miss Hanscom's forte lies in her ability to combine graceful lines and a somewhat original lighting, with the rendering of texture in drapery and flesh tints in soft, mellow lights that are peculiarly effective. At the recent Starr King Fraternity in Oakland both Miss Adams and Miss Hanscom exhibited, criticism being especially favorable to both young ladies.



A STUDENT

BY ADELAIDE HANSCOM

A SIMPLE PROCESS FOR MAKING ENLARGED NEGATIVES

BY H. D'ARCY POWER, M.D.

I have on several occasions referred to the subject of enlarged negative making in CAMERA CRAFT, and so important is the question of "exhibition size" becoming that I have no hesitation in returning to it once more. In a past article I drew attention to the statement of Sir William Abney that at least one step of the enlarging process should be a contact print. But in that article the enlargement was made by light transmitted through a negative or transparency. Some little while ago the thought occurred to me that there did not appear to be any *a priori* reason why the enlargement should not be made by reflected light from the surface of highly polished solio or other gelatino-silver print. I reasoned that such a surface is practically free from grain and that it is capable of reproducing the finest detail and gradation of the negative, and that it is under much better control than a transparency can ever be. I knew that professional enlargements occasionally made, but generally deprecated; copy smaller rather than larger. More-over, as I had never seen such a procedure advocated in any of the very numerous books and magazines, the idea that it had wanted. Now, a photographic experience skeptical of all photo-I have not personally mined to carefully test



ORIGINAL PRINT—EXACT SIZE

I took two average and a portrait. Of the good solio prints of toned them various tints, from the yellow of simple fixation to a blue-black. Some of these I squeegeed on to ferrotype and stripped; others I squeegeed on to glass without stripping; one I left just as it came from the printing frame. I wished to ascertain three points: First, the proper lighting and exposure; second, the best surface to enlarge from; third, the best tint for this purpose. The first point was readily determined by a few trial exposures. The texture of the surface to be copied is of great importance, because any granularity will be magnified in the enlarged negative. I had to choose between the surface of a freshly printed but otherwise untouched solio print, as against a similar print toned, fixed and dried on a ferrotype plate; and third, a similar fixed and toned print squeegeed into optical contact with glass, the print being copied through the glass. It must be understood that an absolutely flat surface is essential. The smallest departure therefrom will catch rays of light, producing reflections that will ruin the negative. In this respect the prints squeegeed on to glass have an advantage

detail and gradation of it is under much better parency can ever be. sional enlargements occasionally made, but generally deprecated; copy smaller rather over, as I had never advocated in any of articles I have read in I had naturally formed been tried and found pretty extensive pho-has taught me to be graphic traditions that verified, so I deter-the matter.

negatives, a landscape portrait I made six the same depth and



ENLARGEMENT — EXACT SIZE

they may, however, possibly lose from the intervening glass causing distortion. The ideal surface appears to be a squeegeed print fixed flat under pressure to the surface of a glass plate.

Finally, it was important to know what tint gave the truest reproduction. In this respect the results were as follows: The print fresh from the printing frame gave a very true negative, with practically perfect details. The same print, when washed and copied under the same conditions, yielded a negative of much flatter quality, with a certain blurring of the details. The toned and fixed prints yielded negatives which were hard proportionately to the redness of the print from which they were copied. The best results, so far as tint is concerned, were obtained from blue-black prints. The head here reproduced was obtained from a blue-black squeegeed print, and is nearly identical in tonality

with the original. I am inclined to think that if the red tones received an exposure proportionate to their redness the resulting negatives would be about alike, but I have not had time to work this out. Certain it is that a red print requires from two to three times the exposure of a blue-black to yield a presentable negative at all. It can hardly be doubted that every manipulation to which the print is subjected—washing, toning, fixing, etc.—alters and weakens, to some extent, the perfection of the image as it leaves the printing frame; that over-printing is not altogether a remedy for this, and that the exact amount of over-printing cannot be judged with perfect accuracy, for which reason I favor the use of an untouched print in which the printing is carried to the exact point required in the final result of the enlarged negative. This will not have such a good surface as the glass-covered or squeegeed print, but the loss from this cause is more than compensated by the gain in control and fidelity of detail in the resulting negative.

Let me now describe the exact technique of this method of enlarging. Across the end of a level table a narrow strip of wood is nailed exactly at right angles. Next, obtain an ordinary wooden box (making sure that it is truly rectangular) and nail on one side of it a kit a size larger than the largest-sized plate you are likely to enlarge from. You are thus provided with an easel that, when placed against the moulding nailed on the table, is perfectly steady and with a true lateral movement. Place in the kit a piece of paper with small letters or very fine lines thereon, and set up your enlarging camera (I use my ordinary long-draw 11 x 14) opposite and sufficiently close to magnify the image one or two diameters, as you may desire. Focus quite sharp with an open diaphragm, and do not afterward stop down. Make sure that the front of the baseboard of your camera is parallel to the front of the easel. Now replace the test object by the solio print of the picture you desire to enlarge and make the exposure, taking care that the latter be full or hardness will result. If the print is toned and fixed the exposure may be made by daylight; if, however, as I recommend, a print direct from the printing frame be used, the daylight might affect the high-lights during the exposure. I therefore use magnesium ribbon. Ten to twelve inches, burned ten inches from the print, is about right for an average solio print. I place a shallow paper tray on the top of the camera, so that it projects over the lens, and burn the ribbon over this. It catches the ashes and protects the lens from direct light and reflections. Let me here remark that in all work with large cameras, and especially with long-focus lenses, the probability of inside reflections should be eliminated by the use of an ample lens hood, or an inside diaphragm. The exposure being correct, a negative identical in quality with the original will be obtained, providing the development be continued to give a corresponding density. If the density be less the picture will be flatter; if greater, more contrasty. It is thus often possible to obtain an enlarged negative of much better printing quality than the original.

The camera being once in position for the required enlargement, a line coincident with the front of the baseboard can be scratched or painted across the table, and a mark made on the camera to show how far the bellows was racked out. Thereafter all further focusing and alignment will be unnecessary.

It is thus seen that the technique is of the simplest, doing away with all

the difficulty of uneven illumination and costly apparatus. The solio print can have clouds printed in before making the enlarged negative; it can be dodged or sunned down, and its quality controlled to a nicety quite impossible in the making of a transparency. I have made many enlarged negatives from transparencies, and, as a whole, they are not as good as those I have since made by the above method.

In conclusion, let me give you three warnings. Be sure the print lies absolutely flat on the easel (it is best retained by a smaller kit fitting in the larger); protect it from side reflections; illuminate it from above, and sufficiently.

THE WAY I LOOK AT IT—AN ESSAY

BY FRANÇOIS VOITIER

Sometimes a title suggests an article, at others an article suggests a title; sometimes I find it very easy to title my articles, at others exceedingly difficult. In the present case it is both easy and difficult, a seemingly paradoxical situation—but let me be more explicit. It is easy because there are a score of headings any one of which would give you an idea of what I intend to talk about—naturalistic photography, impressionistic photography, fuzzytypes, the new and the old school, for instance; but it is difficult because the use of any of these titles would be inconsistent with my views on the subject, opposed as I am to the application of these or kindred names to any method of representing nature through the means of Photography. My library embraces many articles and treatises on this theme, some of which I have read, others I have not; but I propose to say a few words impromptu, as it were, independent of and without reference to anything that anybody else has written—an opinion, in short—merely “the way I look at it.”

Photography is, primarily, a mechanical means of reproducing the objects which meet the human eye, and, if it be permitted to follow its natural bent, the result is inferior to a painting. The camera is just as much of a tool as the brush and the palette; either is mechanical or otherwise according to the way it is used, according to the hand that guides it; either is superior or inferior, one to the other, according to the man behind the camera or the brush, as the case may be. But Photography was not destined forever to be the master, yielding an impression in accordance with the dictates of its own sweet will—an impression at once mechanical, unnatural and uncontrolable. Man's ingenuity came into play and made it the servant, subservient to his every wish and whim. In short, by the aid of Photography ingenious man found means to secure pictures likened unto a painting, not merely accurate in shape and form, but conveying to the senses that feeling of atmosphere and distance which, as a mechanical tool, it failed to record. What these means are it is without the province of this article to recount; sufficient to say that the newly acquired power has been abused by some workers—exercised to such an extent as to defeat the very object for which it was created.

The discussion, for into such it has developed, turns on the question as to what extent this power of manipulating the negative or the print should be availed of. To my mind, there is no room for an argument. As I understand it,

the original object of such manipulation was to make Photography yield an impression more closely resembling nature than was possible by depending upon the lens to do all, and that when this effect has been secured, the means, having accomplished the end, should be discarded.

All honor and credit to the man who injects *real* individuality into his work; who strives after "pictorial effects," so called, with the commendable and rational aim of making his pictures appeal to the mind, feelings and senses as well as to the eyes; who seeks to mentally transport us into the presence of the object represented, using his skill and judgment to produce natural effects of distance, atmosphere and definition—all honor and credit to the man who is actuated by these motives, so that the original and copy be in such perfect harmony that our thoughts and feelings on beholding either are well nigh coincident. But the extremists do not accomplish this, and why? Simply because, as no human being ever saw trees and houses and roads resemble their productions, the mind is non-responsive, refuses to accept them, rebels, is startled, shocked!

I love Nature and spend much of my time in studying her varying moods; find her all-satisfying, all-artistic, all-perfect, inimitable. The beautiful atmospheric effects from early dawn to early dawn both amaze and delight me; they are a constant source of enjoyment and inspiration; I feel that I know them and know them well. Is it then surprising that an intimate acquaintance with Nature should lead me to deprecate any efforts which tend to picture her in a disguise which she never assumes?

If the extremists (I like that word, it is so expressive) merely produced these extravagant effects for their own personal gratification and pleasure, criticism would be irrelevant; but it seems to me that to publicly herald their productions as a cult, a method or a school, cannot but serve to bring the noble art of Photography into disrepute.

But this is merely "The way I look at it."

A TRIP WITHOUT AND ONE WITH

H. C. RUBINOM IN "OUTDOOR LIFE"

I frequently hear photographers say, "Oh! if we only lived back East, where there are trees and beautiful farming country, what pictures we could make!" The last time I was in New York an amateur said to me: "Ah! how I wish I lived in Colorado, where you have such glorious mountains, such impressive scenery! What magnificent pictures I would have!" The old adage about far fields is too well known to be repeated here, but let me say that I have yet to see the country that does not afford more material for good pictures than the average amateur could use up in a lifetime. If I may offer a suggestion as to hunting for subjects, I say by all means make two trips, the first without your camera, the second with it. On the first trip look over the ground carefully, decide what you want to make and the best time of day to make it. The reason I say not to take your camera on this trip is because of the practically resistless temptation to "make something anyhow." This often leads to a disappointing result that disgusts you with that particular locality and prevents your going there again, whereas the second trip, with your mind made up as to about what you want and how to make it, will frequently lead to results beyond your highest expectations.

HOME PORTRAITURE WITH FLASHLIGHT AND A MIRROR

BY W. ROBERTSON

ILLUSTRATED BY THE WRITER

The average house was not built with a view to being used as an impromptu photographic studio. For full-length figures the rooms are too small, unless it is desired to give your sitters a nailed-to-the-wall appearance, by placing them at one extreme end of the room and the camera at the other. This was the difficulty I met with when my aspirations went out to full-length figures and homely scenes indoors by flashlight. I found myself compelled to resort to a lens with short focus in order to include figure studies



"THE LODGER"

aggregated perspective in one of the rooms decorative purposes. This suggested itself to me as having admitted to try again. The mirror being narrow (57 x 17 inches), the result was still disappointing, through angle of view and much into the scene. The mirror being narrow, however, and in "The Lodger."

The diagram shows the room. The sitter was placed at A, the camera at B and the light at C. Precautions were taken to prevent the camera or its support protruding into the field of view. The outside the field of that the rays, direct fall on the lens.

"The Lodger" no secondary light was trusted to the white reflector to supply the necessary reflection; but the result shows that another reflector, placed in such a position near the camera that the light would be reflected up underneath the table would have been an advantage. In ordinary cases, I would not advise the use of a secondary light, for the mirror is a powerful reflector, and in cases where the surroundings reflect a deal of light, no further reflector is necessary. This is often the case when the light is used in such a position that the sitter can see it through the mirror; but where the surroundings are dark, and where dark dresses are worn, a reflector can often be used with advantage. The reason for this is that, although the mirror may seem to reflect an immense volume of light, the reflected light is really not so powerful as might be thought, for the light has to travel from source to mirror, from mirror to reflector, and thence to the sitter, before it reaches the plate.

The above remarks apply generally. There are, however, cases where it is absolutely necessary to use a reflector. The portrait is an example of this. D is



THE LETTER

the sitter, E the light, F the camera and G the reflector. We see, from this arrangement, that the light is on the same side of the mirror as the sitter, who, therefore, cannot see the light reflected, and any reflected light reaching her could come only from objects at the other side of the room. Moreover, the dress was navy blue; it was, therefore, necessary to use an extra reflector.

Both examples were obtained with a lens of eight-inch focus on a 5×7 plate. All the composition necessary in "The Lodger" might perhaps have been made on an even smaller plate. If so, it serves to show that in using a mirror in this case a long-focus lens can easily be used in a small room (the room only measuring 11×9 feet).

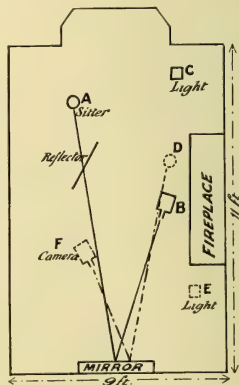
Apart from this advantage, a greater range of lighting is more easily obtained than is the case in ordinary flashlight work. For instance, notice that in "The Lodger" the light appears to come from behind the sitter. This scheme of lighting, though possible in ordinary flashlight work, is more easily accomplished with the use of a mirror, as the mirror frame acts as the screen and requires no adjusting. In the

portrait example it was necessary to shade the lens and a small piece of paper was bound on the side.

The one drawback to this method of photography is the reversal of the image: "The Lodger" appears to be holding the cup in his left hand. Carbon workers will not object to this, but for other processes it is generally better to make a reversed negative.

To those who may try their hand at the use of a mirror in flashlight photography I would give one word of caution: See that the glass is clean, as the greasy substance which settles on glass from the atmosphere will increase the difficulty of the work. In making the flash see that the source of illumination is somewhat higher than the subject's head, else the hard appearance of the average flashlight portrait will be present.

I hope that these few hints and suggestions will help those who must needs work in small rooms to turn out better and more interesting pictures. At least it will serve to increase the opportunities for night work and relieve the long winter nights of their monotony.



THE STARR KING FRATERNITY SALON

BY O. V. LANGE

The pleasing reception accorded the Starr King Fraternity photographic exhibition last year has prompted its repetition this year, with the addition of oils, water colors and ceramics. It was believed, and has been fully realized, that this year's exhibits surpassed anything of the kind heretofore held in Oakland, and a sentiment is growing in favor of a permanent annual exhibition. Most of the noted artists of the State in the different branches mentioned contributed to the exhibition.

The exhibition opened on February 26th and continued three days. The officers in charge of the photographic section of the exhibition were fortunate enough to secure the very best collections from the work of the exhibitors at the late San Francisco Salon.

The arrangements were in the hands of Mrs. Charles D. Gilman, assisted by several artists. The Hanging Committee felt themselves responsible to the public for a well-arranged and harmonious exhibit, rather than to the individual exhibitors, who had to take the chances of having a picture or two rejected for what the committee, after due deliberation, considered valid reasons. To do this the individual exhibits were arranged separate as far as possible, yet forming collectively a satisfactory effect. There were several instances in which the committee found themselves forced to reject photographs, not because they were not good enough in themselves, but because the matting and framing were of such a nature as to inject a discordant note in the exhibitor's collection after it had been placed upon the walls. Several photographs were rejected because of the hard and cold effect in the print completely spoiling a neighbor's exhibit, in which soft, mellow tones prevailed. The committee had no compunction in throwing out a print of this nature, which would have been good if hung by itself among environments suitable to its character.

Great care and much attention were paid to the relative positions and spacing of the different-sized pictures on the walls. Only the larger ones were hung much above the line of sight, those of the medium size on the line, and the smaller ones a trifle below. No straight lines of frames appeared anywhere, either vertically or horizontally. Many of the smaller photographs were rejected because they produced a spotty appearance when the result as a whole was viewed. The consequence was that dignity and repose were manifest everywhere, and the spectator was left free to select and admire his favorite pictures without being harrassed by distracting elements.

The following members of the California Camera Club exhibited:

Miss Laura M. Adams, a decorative panel entitled "The April Baby"; A. L. Coombs, "Mountain Village in Japan"; W. E. Dassonville, "In the Strange Glimmer and Glamor of a Dream"; Dr. E. G. Eisen, "Abandoned"; C. A. Goe, "The Maniac"; Dr. Arnold Genthe, "The Challenge"; Ed. H. Kemp, "Italian Street Dancers"; E. M. Kaiser, "On the Slope of Tamalpais"; Oscar Maurer, "The Two Horsemen"; Dr. D'Arcy Power, "Portrait Study of Professor Wintermute"; O. V. Lange, "Rose Van Houtte"; W. J. Piatt, "In Old Zacatecas"; Walter A. Scott, "An Elfin Trysting Place"; W. J. Street, "Study of Sea and Sky."

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VOL. IV.

SAN FRANCISCO, CALIFORNIA, MARCH, 1902

No. 5

We have noted few references during the past few months relative to the idea of Mr. J. C. Strauss of St. Louis, who recently started a movement looking to the establishment of a separate building devoted to Photography at the Louisiana Purchase Exposition. This subject was brought to the attention of our readers some months ago, and, to our gratification, the Western photographers took hold of the idea with a vim. The California Camera Club, through its board of directors, passed a resolution promising support in every way, and numbers of the prominent professionals on the coast wrote personal letters to the exposition management endorsing the plan.

Strange to say, the Eastern photographic press, after a brief reference to the matter, let it drop, and little seems to have been done in the way of convincing the St. Louis people that the photographers of the country are anxious for a representation at their exposition. This is a matter that is of direct interest to every manufacturer, jobber, dealer and photographer in the country, and should not be allowed to rest. Let us continue the agitation and gain the recognition desired by every leader in Photography. Let us assure the people of St. Louis that we will make the Photographic Building one of the attractions of their exposition, not only from a technical but from an artistic standpoint. Let every man interested in the success of this movement write Mr. Strauss a letter indicating his desire to assist in the exhibition and follow it up with the interest the subject deserves.

We wish to call particular attention to the series of articles on Color Photography by Professor Miethe, the first one of which will be found in this issue. Professor Miethe seldom writes for publication, and was only induced to contribute this series to CAMERA CRAFT and "Photogram" through a personal visit of a representative of the two publications. It will be continued in several issues, and will undoubtedly form one of the most complete, useful and interesting treatises upon color work ever issued.

James W. Erwin, for four terms President of the California Camera Club, has definitely declined to again accept the office. Mr. Erwin's move is in the main induced by his desire to see some other member of the club serve in his stead, believing that a change will best serve the interests of the organization. Mr. Erwin persisted in his belief in spite of the unanimous wish of the club members that he continue to direct its affairs. His loss as the chief executive of the club is one that will be felt keenly. Possessed of an abundant good humor, delightful personality, and withal, a tact that served upon many occasions to smooth over the rough spots that arise in the administration of the affairs of so large an organization, he has endeared himself to the heart of every member.

Mr. W. B. Webster, who is destined to be his successor, has served the club for many years, and has the goodwill and friendship of all the club. His administration of the affairs of both the first and second San Francisco Photographic Salons proved his ability as an engineer of complex matters, and his long experience as Chairman of the House Committee has thoroughly familiarized him with every detail of the club work.

The renomination of Mr. W. E. Palmer as Secretary is a befitting recognition of the manner in which he has conducted the affairs of his office during the past two years. His past administrations have redounded great credit to the club, because of the able manner in which he has discharged his duties.

Mr. Charles A. Goe has been selected for the position of assistant to Mr. Palmer, a graceful acknowledgment of his hard work on the Publicity Committee of the last Salon.

Dr. E. G. Eisen, editor-in-chief of the "Official Program," will again be placed in charge of the club finances.

The new names upon the Board of Directors, J. R. Gwynn, Geo. H. Kahn, F. C. Bangs and G. Knight White, are all well-known and conscientious workers in the club's interest.

It has rained and rained again. The country is saved, the people are prosperous and the photographers are happy.

The Los Angeles Camera Club has announced its intention of holding a Salon in May. Although the time for preparation is short, CAMERA CRAFT is sure that the active southern organization will make the affair a successful one. Every photographer in the State should be represented, and the workers in San Francisco should be the first to rally to the support of the Los Angeles organization, because of the manner in which the Los Angeles photographers assisted the first San Francisco Salon. Although we have not as yet been informed as to the details of the proposed exhibition, we are sure that the plan of operations will not differ materially from other exhibitions. It will be wise, however, in view of the short time at hand, to send direct to the Secretary of the Los Angeles Club for blanks and particulars.

The announcement of the San Francisco School of Photography, to be found elsewhere in this issue, heralds a departure that means much for Photography upon the Pacific Coast. It should and undoubtedly will be a success.



WHAT DO YOU THINK OF THEM?
by CHAS. E. CRANE

JUVENILE PHOTOGRAPHY

BT H. McBEAN JOHNSTONE

In the picturing of children by photographic means there exists, as in no other branch of the art, a necessity that the pictures be unconventional. Not only is it necessary that the picture be unconventional in posing and lighting, for, even more than that, the very methods by which the artist works must be something different from those that are commonly adopted in other branches. In technical aspect, too, must this differing from the ordinary exist, though by this it must not be imagined that anything freakish or faddish is meant, but rather that it be free from that stiffness and somberness which is so often only too apparent. This all sounds easy enough, but, to carry out the idea, the photographer must awaken to a realization of the fact that child photography is a thing entirely apart from "grown-up" work, and that in picturing a youngster he is doing more than merely photographing a man or a woman in miniature. He has a *child* in front of his camera, and that child possesses an individuality of its own. In connection with this it might be remarked that there is an appearance about the productions of a great many workers that the operator has failed to grasp this idea that he has to deal with a youngster; that he, apparently, did not allow his subject the credit of owning sufficient gray matter to be worth treating as more than a mere brainless, wooden image. It ought to be borne well in mind that all children, except those who are very young, indeed, are capable of being approached as human beings.

And this brings up that old, much-written-of point about making a child's acquaintance preparatory to exposing your plates. Go ahead and do it. It is right and proper that you should. Make the child's acquaintance, by all means—if you are able. I say "if you are able" advisedly, for it is a curious fact that there are people who are absolutely unable to make friends with children the way it is intended. They may imagine they have done all that is necessary. The youngster has said "Hullo" and smiled. But there is something more. They must have the child's *confidence*! It's full, complete confidence! It would really appear that, after all, the art of making acquaintance with children is something born in one and not cultivated. And if you can't make friends with them you might as well give up

trying to photograph them. This, you must remember, is an age of specializing, and you will never make a success of it. I know one prominent photographer who, realizing his limitations, could not be induced to make a child's portrait for love or money. I asked him the reason, and this is his answer:

"I can't get down on the floor," said he, "and dance about this way and that on my hands and knees and make a monkey of myself to amuse a kid, and then get right up and make dignified portraits of stately men, while, at the same time, I am feeling all sweaty under the shirt collar. I can't do both, and I have to decide between children and 'grown ups.'"

We know how he decided. But, on the other hand, in the same city of New York we have Mr. E. B. Core, who is known the wide world over for his inimitable likenesses of children. Mr. Core likes the youngsters so well, and so thoroughly realizes that child photographs are his forte, that he makes nothing else.

Perhaps, beyond making yourself known to the child, or, rather, to be more correct, inspiring it with confidence in you, one of the most important elements in the attainment of success is the method of operating that is employed. Now, for instance, I have in mind at the present moment one worker who tells me that he invariably places a chair in a certain spot, and, after getting his focus on it, removes it and patiently waits until the child takes it into his head to wander into range. In strict justice to him, it is only fair to say that his photographs of those children ranging from three to five years, are excellent, but it must necessarily be added that, with those under the age of three, it can hardly, on the whole, be called a brilliant success. Now, just a word on this "getting acquainted" process and other ways of holding the little one's attention. As a rule, the child, if it be of tender years, is brought in in its mother's arms. Behind her come a bodyguard of an aunt, a cousin, a big sister, an admiring neighbor or two, or perhaps all of them. The photographer smiles all round on the party and, if he be of ordinary stuff, takes assistance from the assemblage in getting the child into position, listening meanwhile to their widely varying suggestions. It is to be hoped he does not try to act on any of this advice. You all know the fable about the man, the boy and the ass; only in this case

the photographer who takes the advice is the ass. It is astonishing anyhow, what a lot of ideas, mostly N. G., female relatives have about photographing a baby. They will run all the way from the conventional poses on the rug that they themselves were given in the tin-types of their infancy to the striking of graceful and effective attitudes with a sucking bottle. The poor youngster, in the full glory of its "Sunday-go-to-meetin'" clothes, and at best, almighty uncomfortable, is set up and jerked this way and that into prim exactness and bad temper until, as a subject for a good likeness, it is simply impossible.

Now don't you accept any suggestions. They can never be of any use to you. Don't let the doting parent into your studio at all. I don't care how you keep them out—hang a sign on the door; tell them you make it a strict rule, or adopt any method you like—but keep them out. They may have ideas of their own on the way in which they want the picture to be taken. Most parents have. But talk to them about this before you start work and, once you make the start, on no account must they be around to bother you. Tell the mother that its going to take an hour, and that she can safely leave the little one in your care while she goes out and does a little shopping. Then you will have lots of time to yourself to sit on the floor with the youngster and tickle its wee soul into good humor and happiness to your heart's content.

When you are ready to take the picture, it is going to occur to you that you want the child to look up at the camera. Everyone sets about doing this in a different way. The old-fashioned plan was to hold the "pretty birdie" up beside the lens and "cheep, cheep" until you secured the expression and pose you desired. Up-to-date workers of the new school use a different method. They don't care whether the youngster looks at the camera or not; in fact, they would rather he does not, for then there is not so much danger of an appearance of strain and unnaturalness. So they follow the same plan as Rudolf Eikemeyer, Jr., and place the toy on the floor with the subject and then, when the little one loses itself in the realms of "make-believe," they take the picture so quietly that the operator alone knows when it is done. It is very largely due to such live amateurs as this same Eikemeyer that we are indebted for a large measure of the unconventionality that, day by day, is creeping into the ranks of professionalism and abolishing the hackneyed style that has

been so long in vogue and raising its standard. There is some talk in England at present about the advisability of employing women photographers for this class of work, the excuse being that both mother and child are not so nervous with a woman as with a man. If the child cries, the man is awkward and helpless and has to stand back until the mother hushes it; women instinctively know what to do in such a case. But, as most photographers know, there are various reasons why women are not a success as operators. It must rest with every worker to decide for himself who is to do his operating.

Among other points to remember, it must be borne in mind that there is a certain age at which it is best to photograph children, or rather, a certain age at which they photograph best. When very young, as a rule, they bear almost too great a resemblance to a half inflated balloon or a fine pork sausage, though, true enough, it is a fact that a picture of a child in the arms of its mother opens up the way for many variations of an interesting subject. Then, too, there is a difficulty in making an exposure rapid enough for one so young. If one be working in a studio there is always plenty of light for a quick snapshot, but when, as is often the case with children of this age, it is necessary to go to the house and use the nursery, the difficulties are vastly multiplied.

When the windows are large and face in the right direction, the curtains may be pulled up to the top and an exposure of about a second be given, but, unfortunately, this is not always possible, and then it becomes a matter for study and wasted plates. One thing that must be borne in mind is, that with very young children, it is a fatal mistake to under-expose. Full exposure is an absolute necessity, and then the negative may be developed for softness. Done thus, it will require the least retouching and give the most satisfaction.

Children from three to five years make excellent subjects for studio studies. It is at this age that E. B. Core gets in his best work, and we all know what Core's best work is like. He is a regular fairy godfather to all the little ones, and the way he must get along with them to secure such results as he does is little short of marvelous. One who is interested will find it possible to learn more in five minutes from a study of his productions than the reading of a dozen articles on the matter could teach him. He has a variety of poses, and no matter whether

the child be playing on the floor, peeking roguishly from behind a curtain, standing with forefinger raised in playful admonition, amusing itself with a bat and ball, leaning against the wall in a pout, or in one of a hundred other different positions, they are all equally good. Aune of Portland is another man who does some clever work with children of this age. He exhibited a couple of pictures at the last convention, which, owing to their delicate roundness, were particularly noticeable. Then, to go on to children of a few years more, say about nine and ten, we have Miss Frances Johnson's bright, realistic photographs of children in the fields, in the schoolroom, at the Zoo and in other such places. Miss Johnson goes in for pictures that tell a little story of their own and, what is more, she makes a success of it. But the foregoing examples should serve to illustrate the various methods by which it is possible to handle children of different ages. You, yourself, can suggest many other ways.

Another point to be touched upon is the inclination shown to picture the baby stark naked. There is really no good reason for it. Such photographs are not pretty in themselves (though they are frequently pronounced cute), and as for their being considered as studies of the nude, they are absolutely worthless. Nudity is something altogether different. Nudity relies for its charm on idyllic suggestion, and between that and nakedness there is an almost bottomless chasm. Out of the hundreds of pictures of naked babies that I have seen I can only recall two that were worth looking at a second time. One of these relied for its

peculiar charm on the quaint posing and the delicate, skillful handling of the light with which the subject was treated. The other was a grotesque thing, a little nigger baby in a washtub firmly grasping a sucking bottle in both hands and rolling his big eyes upward in an ecstasy of delight. This, however, is, as a rule, a subject best left alone.

In child photography, a point that has a very important bearing on the result is the setting given to the pictures; first, in the background, and second, in the mount. The first essential in both is simplicity. In fact, throughout the whole of this branch of work, there is no more important point than this same simplicity. It is a necessity everywhere, and most especially in background and mount. Some workers there are who prefer a dark ground, but the majority realize that a more delicate bas-relief is to be obtained from the use of a light one. The main fault of the dark ground is that the subject, especially in the case of a child, is half swallowed up and lost, and then, too, unless a dark mount be used to correspond, a feeling of unevenness is imparted to the whole thing. And surely we do not want to use a dark mount. Do we not rather want something light and dainty and delicate? Something, so to speak, in keeping with the subject. Surely, then, the decision will be in favor of light mounts and grounds. But, after all, perhaps the background is not a necessity. More and more are photographers beginning to picture children without them, simply using the walls indoors and the grass outside. It is a question, too, if it is not preferable. Maybe, after all, the background belongs to the "grown-up" picture.

THE EDITOR'S MISCELLANY

THE NEW ENGLAND ASSOCIATION

The officers of the New England Association have had two meetings in preparation for their coming convention, which they have decided to hold August 20th, 21st and 22d.

The report of the old officers was very gratifying to the new board; in fact, the funds on hand justify the committee in using the entire receipts of the year for convention purposes.

The committee is hustling and is looking everywhere for new features. If conscientious work will accomplish results, the New

England Convention will be a great success this year.

BON MOTI AT THE LAST DINNER OF THE ASSOCIATION

PRESIDENT HEARN — The photographers down this way are given to quick and great affection for their customers, friends, and, especially, other photographers. They are also modest to an extreme. This is proven by the peculiarities of the former officers of the New England Association.

EDMONDSON — I thank you for your most cordial reception. The good social intercourse among all photographers that I

have noticed since my arrival in Boston, and again in the fine gathering at this dinner, surpasses what I had been led to expect, and I must say that I expected much. The national officers are going to do much for the entertainment and instruction of its members next August, and we hope to see you all there with your exhibits. The result of this visit, which I would not have missed for anything, has been such that I am happy to state that I shall certainly look forward with pleasure to your next convention, which I shall attend.

ARMSTRONG—I advise our visiting guests of the P. A. of N. E. to take home some seed of the L. and B. Club and plant it in their territory. If you plant it well it will bring forth good fruit; if not, it will be up against you.

KLINE—I don't know who is the most surprised man, the one who is called upon for a speech and is not prepared, or the one who is prepared and is not called upon. In our territory we have already planted good seed, with great returns. In my own city this shows in Mr. Stein's work, which, while always good, has, within a short time, made wonderful strides. I consider him now among the first, if not at the very top notch, of the artists in our line in the country.

PARKINSON—A prominent artist said the salon pictures of the P. A. of N. E. (as he was viewing them while on exhibition at the Museum of Fine Arts, Boston) "they are too incontinent." You know, Worcester says that incontinent means one who cannot restrain his animal passions. I am very happy, since I had a picture there, that I make pictures so true to life that they cannot restrain themselves.

ARMSTRONG, quoting remark of his little daughter—Mama! Is Papa going to sell the Lens and Brush Club?

HASTINGS—To say I am pleased to be with you, and proud to be a member of the P. A. of N. E., very feebly expresses my thoughts. One object of the association is to promote a feeling of social intercourse among its members, and the fraternizing of this assembly shows, in part, that the object has been attained.

COLLINS—Every little while we hear that some of the great lights in our art of former years have, in their old age, either through sickness or business reverses, fallen from their former state of at least a good living to actual want.

Their present position is very painful for us to contemplate. I think it would be a grand idea for our association to see if some

system of a fraternal order cannot be devised to ameliorate their condition.

BOWERS—It is not our financial worth, or even our artistic ability, that raises us to our highest standard, but conscientiously doing our whole duty. For some years I have, in some official capacity, been connected with photographic associations. I have tried to do my duty in being of some assistance to my brother artists. I left a lucrative position to come to Boston to educate my son and daughter. If I do this for them, even though I do not leave them a dollar, I shall be satisfied with my life work.

SCHERVEE—I am not the Papa of the New England Convention, but at home I am called Pop.

VAN NORMAN—I am pleased to belong to the New England Association, and am equally pleased that I am a member of the National. All the officers of the P. A. of A. are my friends, and I am pleased that they are with us tonight.

REEVES—The National Committee have secured an ideal place for the next convention at Buffalo, where there will be plenty of room for all. We are hustling for a great convention. Come, and we will give you all a good time. Hope you will send us as large and as good an exhibit as you did last year at Detroit.

BOLTON—The New England Association is in a good condition. The former administration have, by their success, placed us on such a footing that the present board of officers feel that they are warranted in using the entire revenue of the year for your benefit, instruction and entertainment, believing this course would better serve your interests than any other. The full board are of this opinion, and, consequently, we will be prepared to offer you next August the best convention that we have yet had. Later on we will more fully inform you of the plans we hope to inaugurate.

HEARN—I think I know the feeling of the New England Association, and I know those present will endorse my statement that I can promise the officers of the P. A. of A. that we will be in attendance and bring our work with us; and we believe that the photographers of the West will reciprocate. We shall expect you.

STEREOSCOPIC PICTURES

Sir William Abney, in a recent communication to *Photography*, deals, among other things, with the question of how near to the

camera must an object be to give a picture showing stereoscopic relief. On the basis that the eye can distinguish lines one-two-hundredths of an inch apart, and that the lenses used are of six-inch focus, separated from one another by an interval of three inches (the usual conditions in a stereoscopic camera), then, at any distance beyond three hundred feet, the pictures would be alike and stereoscopic relief would cease. Of course, this is only true for the usual separation of three inches. If the pictures be taken at greater distances apart (always on the same base line), then the stereoscopic effect can be obtained to any conceivable distance. It is in this way that stereoscopic pictures of the moon have been obtained.

THE NEUHAUSS PROCESS OF COLOR PHOTOGRAPHY

Der Photograph gives a description of the process, of which the following is a summary:

The aniline dyes and many others are bleached by light, but the action is proportionate to the color of the light and the nature of the dye. If certain red, blue and yellow aniline dyes are mixed a dark gray mixture results, which, upon exposure to red light is bleached of its yellow and blue, the red remaining. So with the other colors; each leaves its own color, removing the others. The three primary images thus obtained yield the mixed colors. This was long known, but the process was too slow to be of practical use. Dr. Neuhauss found that by the addition of chlorophyll sufficient sensitiveness could be obtained; also, that for some dyes, such as erythrosin, uranium and methylin blue, peroxide of hydrogen could be used. These dyes are used in a collodium film on a filter paper support, and the image fixed with sulphate of copper. *The British Journal of Photography*, in an editorial, points out that it is at best but a printing process, and expresses considerable doubt as to its value. When we remember the fugitive character of the aniline dyes, the doubts of our contemporary appear to have justification.

ORGANIC ACCELERATORS—ACETONE, FORMALINE, ETC.

Lumiere and Leyewitz have recently published an account of their studies concerning the action of the organic substitutes for the alkalis in development. The use of acetone with pyro in this respect has long been known, and, some years ago, we employed it frequently and found it excellent. We did not, however, observe any such marked ad-

vantage over sodium carbonate as would justify the increased cost and the intense odor it gives off. It is now stated that, to obtain the best results, the following formula must be used:

Water.....	100 c. c.
Sodium sulphite anhydrous.....	5 grams
Acetone.....	10 grams
Pyro.....	1 gram

So made, it is claimed to give a longer range of gradation and to be free from the defects of alkalis on the film, such as filling.

Formaldehyde (formaline, formal, etc.) acts much in the same manner as acetone, only much more powerfully, that is, more like a caustic alkali. The writers recommend it in combination with hydrochinone, as follows:

Water.....	1000 c. c.
Sodium sulphite, desiccated.....	150 grams
Formaline.....	20 c. c.
Hydrochinone.....	15 grams

This is stated to give excellent results in copying black and white. We have tried it on work of this kind and for making lantern slides, and obtained intensely contrasty slides of the purest black. We found that the image flashed out as rapidly as with metol and gained density with great rapidity. It was easy to over-develop, and even to fog, but subsequent reduction yielded excellent slides. We tried the same formula on velox paper and obtained prints of the purest and most intense black, but with a great tendency to fog. We are inclined to believe that further experimentation would result in a very valuable formula for velox.

A NEW FORM OF ELECTRIC INCANDESCENT LAMP

Speaking of new forms of electric incandescent lamps brought out in recent years, *Cassier's Magazine* says:

"One inventor, working upon quite different lines, has brought out an incandescent lamp which has shown very high efficiency. This lamp, the Cooper-Hewitt, employs mercury vapor in a suitable glass tube, or bulb, instead of a filament, through which an electric current is caused to pass. The current is led into the tube by wires sealed in each end, a small quantity of mercury being placed at one end of the tube. It is, however, found that a much higher electromotive force is required to start the current through this tube than is necessary to maintain the normal operating current after it is started. On this account a special device to obtain a momentary high electromotive force is requisite. The starting may, however, be

facilitated by warming the tube by means of a Bunsen burner, by employing a vapor of the sulphide of mercury, or in other ways. Tests of one of these lamps, a tube fifty-four inches long by an inch and a half in diameter, showed it to have a mean efficiency of about 0.55 watts per candle power, which is equal to about eighty-five sixteen candle power lamps per horse power. When the current is passing through the tube the vapor glows with an intensely bright light; which, however, unfortunately, is very poor in red rays, and hence everything red exposed to it—the lips, the ears, the cheeks—takes on a blue-black color. The result of this is that a ghastly, if not a ghostly, effect is produced in a crowded room or hall lighted by these tubes. This effect is removed by the presence of a number of ordinary incandescent electric lights, which supply the essential red rays. The inventor, it is understood, is at work upon this feature of the light, and will, doubtless, remedy it. He has already ascertained that a mixture of mercury vapor and nitrogen produces a rich, soft light. The light emitted by the mercury vapor lamp is evidently quite rich in actinic rays, as excellent photographs have been taken with it with an exposure of but a few seconds; indeed, the light appears to resemble daylight in this respect."

A NOVEL COMPETITION

The Capital City Camera Club of Sacramento has originated a novel competition in connection with the coming Street Fair, the object being to collect such pictures as will best advertise future street fairs. The following circular has just been issued:

At the Sacramento Street Fair and Floral Festival, May 12-17, 1902, under the directions of the Capital City Camera Club, Sacramento.

Competition by all amateur photographers in California is asked according to the following schedules and terms:

Classification of subjects:

- Class 1. Processional.
- Class 2. Individual floats and special procession features.
- Class 3. General views of Fair and Midway.
- Class 4. Night effects.
- Class 5. Individual Fair exhibits and booths and decorative features.
- Class 6. Portrait groups and grandstand views.

Class 7. Queen and court on throne.

Under these classifications there will be divisions and subdivisions of merit, so as to provide about seventy-five premiums worthy of the competitive effort of any and all amateurs. There will be from two to three sweepstake premiums for the most merito-

rious series of pictures (one of each classification); the others will be divided among "general premiums" for hand-camera work, and a special group of premiums for work done with kodaks on films not larger than 4x5. A complete schedule of premiums and competition will be issued later.

TERMS AND CONDITIONS

1. All competitors may make entry, on any day of the Fair, at the Camera headquarters on the grounds, according to the terms of the entry book, giving name, class entered for, postoffice address, etc.

2. Competitors, to be considered, must forward, prepaid, to the Managing Committee of the Camera Competition, at least one mounted print, not under glass, and one unmounted duplicate, within fourteen days after the close of the Fair; the second to be permanently the property of the Street Fair Club. The print or prints must bear no name, mark or sign whatever, on back or front, neither imprint nor designation. In the same envelope or package the competitors must place a slip or card giving name, residence, postoffice address and title claimed for the picture, and also a signed statement that the taking, developing and printing is the work of the author of the print as an amateur, and such other facts as the character of the schedule of premiums, to be later announced, may require.

3. Every competitor agrees that if the Street Fair Club desires to use any print for its purpose, in addition to those submitted for judgment, the same shall be furnished in new copy by the author, in form suitable for reproduction by half-tone, or otherwise, as the said club may desire, on payment therefor of a reasonable sum to fully cover cost thereof.

But the author shall have the right to specify that his or her name, as photographer of the picture, shall be suitably placed on the margin of any reproduction made.

Likewise, the Managing Committee of the Capital City Camera Club pledges itself to indorse upon each submitted print the business title of the premium giver whose premium may be awarded for the print judged, and the same imprint shall appear in any reproduction made therefrom, after the manner usual in giving credit. But it shall not be necessary, in reproduction of prints, to name them as second, third, fourth best, etc., but simply to give them the title of the premium, as, for instance, "Smith & Brown Dry-plate Premium. Photo by —"

4. No name, number, or other distinguishing mark shall be made upon any negative, a print from which enters competition, so as to appear on the print.

5. No picture, except from a kodak, shall be from a negative of less than 4x5; but size of print will not be a controlling factor in judging of merit of composition or execution. No print shall exceed 8x10.

6. All competing work must be pure Photography, but retouching of negatives is not forbidden.

7. The Jury of Award will be chosen by the Capital City Camera Club, through its

Committee of Management of Competition. The names of the jurors will not be made public at any time. No member of the Camera Club or of the Street Fair Club, no competing amateur, no member of the Managing Committee, will be chosen upon the jury, which will be selected from among persons specially qualified by knowledge and taste in art. No member of the jury will be given any information as to the identity of the author of any print in competition, or given any means of ascertaining the authorship of any print.

8. The premiums offered are to be delivered to the committee in Sacramento free, without transportation costs, and will be delivered by it to those to whom awarded.

9. All competitors should consider, in taking pictures, the availability of the same for reproduction for advertising purposes.

10. The Street Fair Club will afford the Competition Managing Committee special facilities for amateurs to make studies of floats and movable features at a given time and place, if desired.

LA LOS ANGELES SALON.

At a recent meeting of the Board of Directors of the Los Angeles Camera Club it was decided to hold an exhibition of photographic art during the first week in May, 1902.

The exhibit will be known as the First Los Angeles Photographic Salon, and invitations have been sent to the leading camera clubs and photographic artists throughout the United States asking them to send specimens of their work.

The names of committee members will be announced in the April *CAMERA CRAFT*.

CALIFORNIA CAMERA CLUB

The next regular meeting of the club was held on March 11th, with the following program:

Slides—From the Newark and Buffalo camera clubs.

Miss Lillian M. Quinn—A Telephone Romance.

Mr. Hugo Herzer—Vocal selections.

Little Cecil Cowles, of the Tivoli Company, in a Ferris Hartman imitation.

Miss M. Hochenbrock—Recitation.

NOTES

The San Francisco offices of Kirk, Geary & Co. have been removed from 220 Sutter Street to 112 Geary Street, where they have opened a retail store, to be devoted entirely to photographic goods. This move will not affect the wholesale department, which will be conducted upon the same lines as in the past.

The new store is in one of the most prominent localities in the city, and is fitted up with handsome fixtures in oak.

An especial effort will be made to keep in stock every instrument, appliance and accessory now used in Photography.

The latest novelty produced by the Stuparich Manufacturing Company is a "Wood Frame Mount," made with a genuine wood face in maple, sycamore and pine. The new mount has matched beveled openings and beveled outside edges, with square corners. They are made to order in a number of sizes and styles, and are extremely rich in appearance.

Other new lines are the Ceredo, a royal tan card with royal chocolate center, for cabinet-size pictures; Mondovi cards in black for oval cabinets, and a dainty series of Acme cards in light tints, suitable for spring pictures.

Mr. Martin Freidell, of the Rochester Optical and Camera Company, made his first trip through the West during February and March with the new products of his company. Besides many new features on the old and popular Premo and Poco cameras, there are two novelties that will prove very attractive during the coming year.

The "Snappa" is a new and compact magazine camera, holding twelve plates, or twenty-four cut films. It is a small but beautiful instrument, and represents years of experiment and labor.

The "Pocket Poco" is another novelty that will be heard from during the year. It is the smallest plate camera on the market and fits readily into the pocket. It is made in the best Poco style, and, as the R. O. and C. Co. seems bent on filling all the popular magazines with full-page advertisements, the demand is sure to be great.

Mr. Gilbert E. Mosher, vice-president of the Century Camera Company, recently made a trip through the West in behalf of his company. His line attracted attention everywhere for the beauty of the workmanship displayed and the many new and novel features introduced.

The "Century Grand" represents the triumph of modern camera making and will make many friends on the coast. The most prominent of the new features lies in the swing-back, which is operated by the same rack and pinion used for extending the bellows. This rack and pinion movement is easy of operation, and the bed of the camera can be locked in any position by a simple push of the mill head of the pin. The Century Company also make a new focal-plane

shutter, very simple in operation, and at a price much lower than those imported from Europe.

Mr. Adolph Heinn, president of the Heinn Specialty Company, has returned to the East after spending several pleasant weeks in California. Mr. Heinn took great pride in exhibiting a number of new albums and novelties to the editor, a series of carbon black albums in a brilliant red morocco binding being his most striking innovation. A new film album, now being made by his company, will prove attractive to the followers of the kodak.

The editor is in receipt of a handsome series of pictures from J. C. McLaughlin, at present traveling in the Orient, several of which will be reproduced shortly. Mr. McLaughlin is enthusiastic over the success he has experienced with Hammer plates, saying that "their speed is wonderful when you consider the faint actinic power of the light in this latitude."

The Nominating Committee of the California Camera Club have made the following nominations, to be acted upon at the annual meeting of the organization in April: For President, W. B. Webster; First Vice-President, H. B. Hosmer; Second Vice-President, J. J. Lermen; Secretary, W. E. Palmer; Treasurer, E. G. Eisen; Librarian, I. O. Crosscup; Directors, J. R. Gwynn, Geo. H. Kahn, F. C. Bangs, G. Knight White.

Messrs. Hirsch & Kaiser, 7 Kearny Street, San Francisco, announce that their 1902 catalogue is shortly to be issued, and that a copy will be forwarded, free of charge, to any address.

The eleventh annual exhibition of the Toronto Camera Club will be held April 1st to 5th, inclusive. Entries close on March 22d. Address pictures to Hugh Neilson, Forum Building, Toronto.

J. B. E.—The triplex or athlete shutter made by the Prosch Manufacturing Company will answer your purpose, better, perhaps, than any of the other shutters mentioned. These shutters can be used for all ordinary work, and, in addition, can be speeded up for pictures of rapidly moving objects.

The following card has been issued by the Print Committee of the California Camera Club:

PRINT EXHIBITION.

Pursuant to the announcement made by the

Print Committee some weeks ago, we are pleased to call your attention to the fact that we have now on exhibition at the club rooms some ninety pictures of the work of Dr. F. Detlefsen of Chicago. Dr. Detlefsen has achieved renown as an artistic photographer, and we should congratulate ourselves on having the opportunity to study his work, and it is hoped that every member of the club will improve this opportunity given us through the courtesy of the Los Angeles Camera Club, and bring your friends.

These pictures will be on exhibition for two weeks, commencing Saturday, March 1, 1902.
PRINT COMMITTEE.

W. E. PALMER, Secretary.

To the Editor of CAMERA CRAFT.

DEAR SIR: Your attention is called to the fact that the Photographic Society of German Amateurs will give an exhibition of photo prints at its headquarters, 62 East Fourth Street, New York, from April 24 to 27, 1902.

Amateurs are invited to send prints for competition, subject to the following conditions:

1. All prints will be received free of charge.
2. All prints sent by mail or express must be prepaid.
3. Sufficient postage must accompany prints to be returned.
4. All prints must be mounted. Enlargements of same not to exceed 10 x 12.
5. Six prints (any subject) are required for competition.

Yours truly, A. BAURHENN, Pres.
408 5th Street, New York.

Our recent request for prints from extra fine negatives made with Bausch & Lomb lenses has brought us a very large number of the greatest variety, and we wish to express our indebtedness to our friends who have so kindly responded. We can still use some extra fine portraits, groups, and long-distance photographs made with single systems of the Bausch & Lomb-Zeiss Convertible Anastigmat and with Plagimat lens, as well as some extra-rapid instantaneous pictures of animals and men in motion. We should also like to hear from more users of our wide-angle lenses, our portrait lenses for professional work, and from those making $6\frac{1}{2} \times 8\frac{1}{2}$, or larger, pictures, with the Bausch & Lomb-Zeiss or Plagimat lenses. More of our friends using the bichromate ray filter and hand-camera telephoto might also be heard from. It is our intention to issue a profusely illustrated catalogue, and we want to have representative work from all classes of lenses.

BAUSCH & LOMB OPTICAL CO.



PETS
by JAMES E. TAGGART

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IV.

SAN FRANCISCO, CALIFORNIA, APRIL, 1902

No. 6



DOWN HILL

THROUGH THE HIGH SIERRAS ON SKIES

BY ARTHUR C. PILLSBURY

ILLUSTRATED BY THE WRITER

When the porter scratched on my curtain and whispered, "Be in Truckee in twenty minutes," it took me a full tenth of that time to realize just why I was to get off at Truckee. I touched my window curtain and it went up with a whirl that startled me even as much as the sight that met my sleepy gaze. As far as the eye could reach through the interstices of the great snowsheds a blinding stretch of snow-covered hills flitted by. The difference from the day before, from balmy breezes to the land of snow, my sound sleep and sudden awakening combined to impress me with the fact that I was still in the land of Nod, and that it was "an idle dream." But the whirling clouds of steam, boiling out in the frosty air and clinging to the sides of the sheds, the slant of the sunlight through the roof of the covered track began to have its effect, and

in another minute I was wide awake and full of the anticipation of the native Californian when he approaches snow-covered fields and hills.

At Truckee I piled off the sleeper, my shoulder cumbered with the varied paraphernalia of the photographer, and began to get accustomed to the gaze of the sun as it peeped over the hills. The engine puffed and blowed, leaving great balls of steam to circle about in the frozen air and, finally, with a parting burst of steam, disappeared in the distance. By the side of the station stood the sleigh, which was to carry me to Tallac, the four horses steaming and pawing the snow in their impatience to be on the move. Nothing could be seen of the narrow gauge track over which the pleasure-seekers throng to



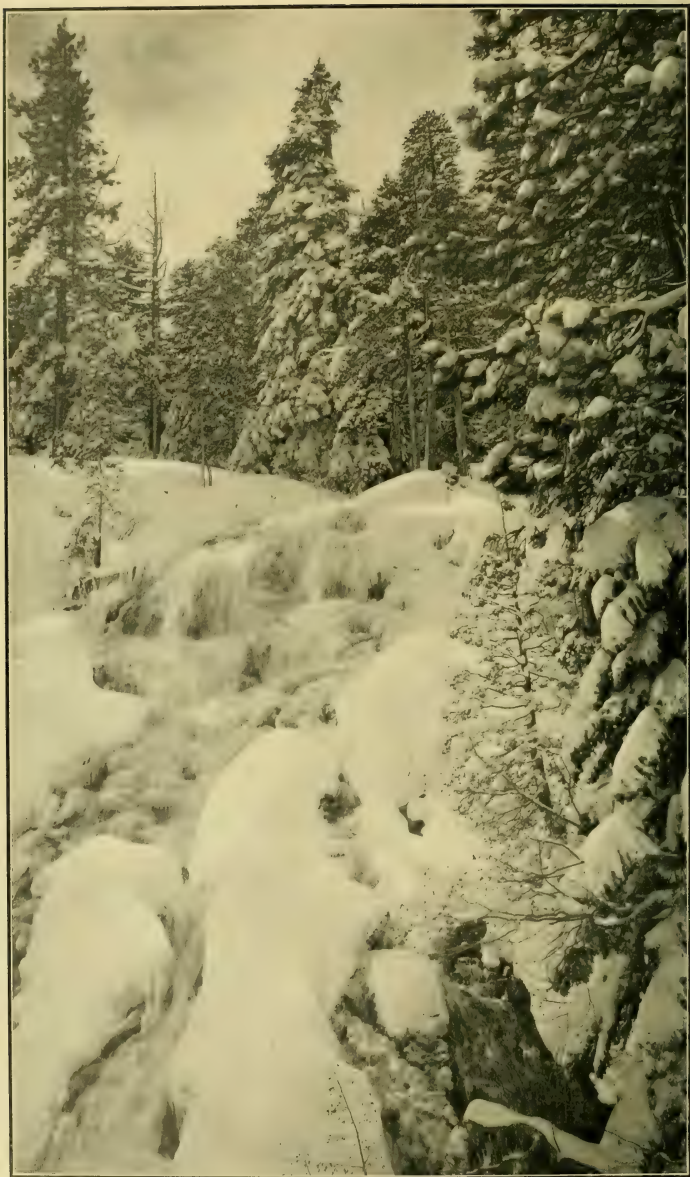
—stood the whole party on the stove front and made a picture of them

Tahoe in the summer. Four feet of snow hid it, and all of the rough landmarks familiar to the summer visitor from view.

The drive to Tahoe was one that I shall always remember. Nothing could have been more invigorating, more bracing, than the clear, cold atmosphere of the Sierras. At the hotel I met a warm welcome not unmingled with surprise. Visitors to Tahoe in the dead of winter are not numerous, and host and attendants talked with me as if with a visitor from an outside world. Still it was pleasant, and when I told them that I came to make pictures of the snow their interest increased. All the day we were making plans. Toward night it began to snow, and the next morning the big white flakes were still scurrying down.



EMERALD BAY AND A POINT ON ITS SHORES



EAGLE CASCADES



TAHOE TAVERN IN ITS FIRST WINTER GARB

I came just in time. It snowed for three days, and when the sun finally peeped through the flying clouds the inhabitants said that it was the heaviest storm in many years.

During the storm I busied myself in the shop of the carpenter making a sled for my camera, and under the supervision of the carpenter himself made a pair of skies out of tough oak. It was a job that I was proud of, for a lighter pair and a more serviceable one was not to be found in the whole of the Sierras. So the carpenter said. But learning to use them was another matter. Of course, you couldn't hurt yourself by falling in the snow, but it is not a comfortable experience. The skies I made were about eight feet in length, but before I was a finished performer I thought they were a hundred. After I learned the peculiar sliding motion indulged in by the natives I began to get along better. In a short time I was an expert and managed to keep abreast of the youngsters who served as my instructors. On level snow it is an easy operation. You shuffle along at an ordinary walking gait. The stride takes you about three feet, then you slide about a foot. Down hill you simply let go, then greased lightning couldn't catch you. Up-hill going consists of a series of tacks, much in the manner of a wind-jammer caught in the teeth of a gale. During the progress of the storm I made many trips from the hotel, on several of which I was accompanied by a large body of the inhabitants, who enjoyed the fun fully as much as I did. After the return from one of these trips I stood the whole party on the store front and made a picture of them. The snow was drifting down in a business-like fashion, and occasional gusts whirled the snow over the camera and my subjects. Little did the hardy mountain people mind

this, however, and although I experienced a peculiar sensation such as you feel when you are not quite sure that you are doing the proper thing, I made the exposure and we continued on our way.

When the storm ceased I loaded my camera and outfit on the sled and, accompanied by several of the hotel people, made my first trip for pictures. We attached a long rope to the sled, and catching hold, we strung out across the snow. No one who has not spent a day in the high country when it was full of snow can appreciate the beauty and awe of the trees and hills. Every branch on every tree held its great ball of snow, the ugly fissures and projections were smoothed over by the white carpet, and wherever you went it mattered not. One moment we were on the top of a drift fully a hundred feet deep; at another we were gliding under tall trees that bent in low obeisance to the majesty of winter. At the falls the scene was different. Stalactites of blue-green, ice-bordered, the tumbling mountain stream and the great white frame around the whole made the water look dark and disagreeable. The falls in winter are not so pleasant as in summer, but there is a mystery about them that is fascinating.

The next day I made the trip to Emerald Bay. I was the first visitor since December, and they welcomed me with open arms. At Glen Alpine we struck snow that covered old Mother Earth eighteen feet deep. On this trip I carried my camera over my shoulders with a pack strap, a trick I learned in Alaska. This left both hands free, and there were times when I needed both of them.

I made many pictures on these trips, and on a number of them carried a portable darkroom, so that I was sure that I had what I wanted before leaving the scene. A four hours' trip through the snow without results is not satisfactory to a fellow's peace of mind. This portable darkroom plan is one that



RETURNING FROM A TRIP

I am never going to neglect in the future. Fully half the pleasure in Photography is lost when twenty-four hours elapse between the time of exposure and the development. Although accompanied by many difficulties the pleasure of seeing what you have almost immediately amply repays you for it.

On all of the pictures reproduced I used Seed's cut film, Goerz lens, dense color screen and a small stop. The tripod I managed to keep above the snow by planting the legs on my skies.

Some day the Southern Pacific will run winter excursions to the lake, and the hotels will keep open all winter. Then the city man who wants to get out of the world for a few days will have the pleasures that I have merely hinted at. He will thank me if he follows my advice and takes a camera and a gun. The hunting, although not varied, is full of sport. Rabbits there are in plenty, with duck and geese to spare.

THE THREE FUNDAMENTAL PRINCIPLES OF DEVELOPING

BY H. W. H. PENNIMON

With a photographic experience reaching back thirteen years, to the days when albumen paper was the standard and gelatine either for plates or papers was regarded as still somewhat of an experiment, I have absorbed, with more or less profit probably hundreds of articles supposed to clarify, if not to permanently, settle the subject of the correct development of the gelatine plate. And yet I do not remember to have read any article giving concisely and clearly the fundamental principles governing this most common of photographic manipulations, wherein the individuality of the operator is almost as much in evidence in the finished picture as in the selection and lighting of the subject itself.

Too much has already been written upon the "saving," so-called, of under or over exposures. Rarely is it worth while to make the endeavor. It will here be taken for granted that the operator has a fair knowledge of light values and the speed of his plates. If not, he had best invest in an exposure disk, not bad for reference in any event. Unless defective, all lenses are of practically the same speed with the same stop number, a fact not generally appreciated and certainly not emphasized by the manufacturers.

All developers on the market are good, if one will take time to become thoroughly acquainted with their individual peculiarities, for the best development depends in a large measure upon an intimate acquaintance with the correct normal action of the developer used. I prefer metol and hydroquinone in equal quantities for ordinary use, for the reason stated, and for keeping qualities and cleanliness the following points are too often repeated to need more than passing mention: Contrast (in excess, hardness) is a result of strong or cold developer, or developer without sufficient alkali, the first resulting in rapid and the latter in slow development of a correct exposure. Detail (in excess, flatness) is a result of weak or warm developer, or from an excess of alkali, the first giving slow and the latter very rapid development. A reasonable over exposure in normal

developer gives a flat negative, and a slight under exposure results in too much contrast. The developer can be made to counteract these errors of exposure to a certain extent, and thus govern the printing quality of the negative.

The ruby light in the darkroom *must*, for uniform results, be always the same, whether it be dull or bright. For this reason daylight is utterly unsuited for the purpose. I prefer a good lamp outside the darkroom entirely, and a sliding sash of ruby glass with a frame covered with yellow postoffice paper that can be fitted on the inside. The two make a safe, comfortable light for plates, the ruby glass alone for papers and the lamplight for bromide exposures or gas-light papers. Both electricity and gas vary in brilliance more than the oil lamp.

I am often asked by beginners, "How can I tell when my plates are developed? How long shall I develop them?" These questions can no more be answered in exact terms than a cook can tell a novice to the minute when a joint will be properly roasted. The ruby light being uniform a negative is judged by three things — first, the apparent density by transmitted light; second, the speed with which the image has developed, and third, the strength of the image which shows through on the back of the plate. The face or film side should receive absolutely no attention after the first appearance of the image, which determines whether the developer should be strengthened or weakened for over or under exposure. Taking for granted that this correction has been made, or that the exposure was correct, the apparent density must be carried to a point that will allow for the loss of density in the fixing bath, and this loss is governed both by the speed with which the plate has developed and the appearance of the back of the plate.

A quickly developed negative loses greatly in the hypo and must, consequently, be developed to greater apparent density, while the slow negative loses little. Again, a negative where the image does not show well through on the back will lose more in the hypo than when the image is plainly visible.

Bear in mind that, although the face of the plate may become apparently as black as Egyptian night, it has nothing to do with the result, and only indicates a slight surface light or chemical fog. Examples might be multiplied indefinitely, but the intelligent reader can figure out the different combinations of these three factors for himself, and the impatient man who depends on "luck" for his photographic results has probably skipped to shorter paragraphs before this point.

Finally, to repeat:—The three fundamental principles governing scientific development are apparent density, speed of development and appearance of the back of the plate. Surface indications are of no value beyond the first few minutes, and time is altogether unsettled by the other two factors. All that has been written on plates applies equally to films, except that all the factors are carried much further on account of the thin coating of emulsion upon the celluloid which loses density in the fixing to a most unexpected degree unless carefully developed. Practice, cleanliness and care are necessary for satisfactory developing, but with these and a clear understanding of the points to be considered the results will inevitably reach a certain uniform excellence which is the only firm foundation for any valuable originality.

LIFE UNDER FOREIGN SKIES

A FEW STRAY SNAPS IN VARIOUS
SUNNY LANDS THROUGH WHICH
I HAVE WANDERED



BY OSCAR MAURER

TRAVELERS IN MEXICO
REMNANT OF THE TENTH CENTURY, SPIEZ, SWITZERLAND
FRENCH PEASANT
IN A DUTCH VILLAGE
VILLAGE LIFE IN GERMANY









THE LOS ANGELES SALON

BY HELEN L. DAVIE

The members of the Los Angeles Camera Club are at present busily engaged in preparing for the First Los Angeles Photographic Salon, to be held in the clubrooms from May first to tenth, inclusive.

The idea of holding such an exhibition in Southern California originated with the members of the club, and all the details are being carried out by them. The Chairman of the Salon Committee, Mrs. A. S. C. Forbes, reports the most encouraging progress. The sub-committees have been appointed, and each individual member is working hard to make the best showing possible.

Communications are being received from photographers throughout the country in answer to the announcements recently sent out, and everything indicates that the first week in May will find hung on the walls of the Camera Club the best productions of Western workers as well as many artistic productions from the East.

This will be the first opportunity the Southern California amateur has had of comparing his efforts with those of the best-known workers throughout the North and East, and it is being eagerly welcomed by the local photographers, who are very enthusiastic over the coming exhibition. It is hoped that San Francisco will co-operate with the Los Angeles Club in this rather ambitious venture for so young an organization.

The following are the rules and regulations governing the exhibition:

No charge will be made to exhibitors.

Any number of pictures may be submitted, but not more than ten pictures by one exhibitor will be hung.

The pictures will be hung in the gallery on a background of dark green.

All pictures submitted must be separately framed (with or without glass) or matted under glass.

The title of each picture and the exhibitor's name and address must be clearly written upon the label provided, which must be attached to the back of each picture by the exhibitor.

Nothing may appear upon the front of the picture except the title. The exhibitor's name will be placed thereon by a committee after the award.

Pictures having been awarded prizes in other Salons will be hung, but will not be eligible to an award.

No accepted picture may be removed before the close of the exhibition without permission of the Salon Committee.

Pictures must be forwarded at owner's risk, carriage prepaid, and delivered at the Los Angeles Camera Club not later than April 20th, 1902. Return charges must be paid by exhibitor.

Address all communications and pictures to the Los Angeles Photographic Salon, Los Angeles Camera Club, 321 South Hill Street, Los Angeles, California.

Unless otherwise instructed by the exhibitor the Los Angeles Photographic Salon shall have the privilege of reproducing any accepted picture in their Catalogue or in their Club News.

The management will use all due diligence to prevent loss or damage to pictures in their charge, but will not be responsible for any loss or damage.

Arrangements will be made for the sale of pictures, if desired, subject to a commission of twenty per cent.

Prizes are offered as follows:

For the best picture of the Salon — the Los Angeles Camera Club medal.

For the first and second pictures in the following classes: Marine, Portraiture, Landscape, Genre, Scientific, Still Life, Animal Studies, Interior and Architecture — a certificate of merit from the Los Angeles Camera Club.

For each collection of pictures receiving meritorious mention — a diploma of merit.

The Salon Committee is composed of the following members:

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The Jury of Award is as follows:

J. Bond Francisco, Prof. W. C. Judson, Prof. Herbert B. Perkins, Will E. Chapin and C. H. Newcombe.

LANTERN SLIDE PICTURES

BY OSCAR MAURER

Quite recently I had occasion to make some lantern slides, and owing to lack of experience, I had a considerable number of weak, sickly-looking positives on glass. They were not thrown away. I found it possible to obtain stunning effects by backing them with various kinds of paper, in different tints and textures. A cardboard back and a strip of binding paper completed my labor, and my lantern slide failures excite the curiosity of all those who see them.

A STRIPPING BROMIDE PAPER

BY OSCAR MAURER

A year ago it occurred to me that the manufacturers of bromide papers were not fully awake to the demands of the photographers, particularly the more advanced workers. At present the variety of bromide papers is exceedingly limited. True, we have the Eastman Royal and the Rotograph Imperial, filling a want that was long felt. But one tires of a sameness of quality and tint, and, it must be admitted, to manufacture and keep on sale a great variety of papers would not be profitable business. In thinking over this question it occurred to me that a *stripping bromide paper* would fill all requirements by making it possible to transfer the image to any support one sees fit. A single transfer is all that is necessary, as one can make a reversed enlargement by reversing the negative in the enlarging camera. To prove the feasibility of my plan I prepared a smooth drawing paper with soluble gelatine, then coated it with a bromide paper emulsion. The enlargement was made in the ordinary way, and the print fixed in *plain* hypo, so as not to make the gelatine insoluble. I then transferred the picture by bringing it in contact, under cold water, with a tinted, rough paper, keeping it under pressure between blotters for fifteen minutes, and finally stripping it from its original support in warm water much the same as a carbon print is transferred, but with less difficulty. The possibilities of the process are obvious. One can produce enlargements on any of the exquisite rough-tinted charcoal papers, obtaining effects quite impossible in any other way. Cannot the manufacturers be induced to put a stripping bromide paper on the market?



BUSY
by JAMES E. TAGGART

GUM BICHROMATE PRINTING

By H. D'ARCY POWER

Much has been written on the gum method, and yet, from inquiries addressed to this journal, it is evident that the mass of amateurs are quite unacquainted with its technique and characteristics. This is less to be wondered at, considering the variety of the advice tendered by different workers, each devoted to his own method. CAMERA CRAFT has, so far, given no detailed account of the process; hence the writer has been requested by the editor to give an account of his own experience. It is not claimed that anything new will be said, but what is given is the result of actual working experience of one whose pictures in gum have been favorably received by the salons.

Some five years ago, M. Demachy, who, if not the discoverer of the process, is the St. Paul of the movement, wrote an article for the *Photographic Times*, giving a none too glowing account of its advantages and a somewhat generalized description of its technique. He had previously published in London a book on the subject, called "Photo-aquatint," which has since gone to a second edition. From this time on a number of writers in all languages have written thereon with much addition to our knowledge, but to the confusion of the ordinary reader.

Now, before a man tries to learn gum printing, let him first ask himself two questions: Will he have any use for it in the class of work he desires to produce? Has he such a knowledge of the principles of composition, and light and shade as will enable him to *make a picture* when he has acquired the technique? For let it be clearly understood that gum has nothing to offer as a reproductive method. If the worker is desirous of obtaining a simple and accurate reverse of the negative, he *can* obtain it in gum, but he could do it more simply and satisfactorily on solio, or if he desired variety of color and texture, by the carbon method. The great value of gum is that you are not tied to the reproduction of the qualities of a negative. You can create. With the worker in gum, it is as with the painter, the product of his labor is determined not by the medium but by himself. If he knows what he wants, and by practice has acquired the manipulative skill, he can obtain it. If he does not know and has not learned he will get a daub, although the negative be the finest possible. The conditions of gum printing are not unlike that of the artist working in charcoal, who covers the paper with the black powder and then with finger and stump works out the high-lights and half-tones until he has the pictures he has conceived. The gum worker has the same task, with the advantage that under and in the pigment is the outline of the picture at which he is working, to be left or modified at his pleasure. If, therefore, he has not the artist's power to conceive a picture, or is ignorant of what should be its parts and tones, let him by no means spoil good paper with gum printing. To put the matter shortly, good results in gum are impossible without a knowledge of art principles and method.

Now for the process. When a solution of gum, gelatine, albumen or other colloid is mixed with a bichromate (preferably of potassium or ammonium) and exposed to light, the colloid becomes insoluble in water. If pigment were mixed with the gum it would be entangled and fixed in the insoluble gum. If,

therefore, a mixture of gum, bichromate and pigment were spread on paper, dried in the dark, and then exposed to light under a negative, and then washed in water, the parts rendered insoluble by the passage of light through the negative would remain and the rest wash away. A print would result, consisting of gum and pigment. Nothing in the world could be simpler in principle. When gelatine takes the place of gum, it is known as the carbon process. This latter with certain modifications gives us ozotype. But to return to gum. The working materials are paper, solution of gum arabic, fifty per cent, solution of ammonium or potassium bichromate, C. P., ten per cent, moist water-color pigments as required, brushes, agateware pan to develop in, flat wooden board and thumb tacks.

PAPER

Almost any matt-surfaced paper of any required tint can be used, providing it is not too spongy in texture, but experience has confirmed most gum-workers in a preference for certain brands. The writer does most of his work on Whatman's water-color paper, using both the hot and cold pressed. Steinbach, although expensive, is also excellent. Good results are obtainable on the cheaper grades of German drawing paper, and where broad effects are aimed at the various brands of charcoal paper are to be recommended. Some writers say that the paper be sized preparatory to use, but the writer has not found this necessary.

GUM

Take two ounces of clean, white gum arabic; tie it in a piece of cheesecloth and suspend it in three ounces of water. When dissolved pour off the clear solution for use. Ready prepared mucilage as sold has been found satisfactory by some workers. The addition of a drop of carbolic acid or formaline will preserve it.

BICHROMATE

Dissolve one ounce of the potassium or ammonium bichromate in ten ounces of water.

PIGMENTS

The best pigments for general use are Windsor & Newton's water colors in collapsable tubes. If these prove too expensive, equally good results may be obtained by lexigating common dry colors. This is done by stirring a pound of the color up with a quart of water; let it stand a few seconds for the coarse particles to settle (the longer it stands the finer will be the product) and pour off the upper part of the fluid into a large vessel; repeat this many times and then collect, after an hour, the fine deposit in the large vessel for use. The best colors for the beginner to commence with are lampblack, burnt sienna and the various warm blacks and browns that can be obtained by combining these colors. Indian red and Venetian red are also good colors, and form good combinations with black. A landscape green is obtained from a mixture of Prussian blue, yellow ochre and lampblack. When combined tints are to be used they should be mixed with a little of the gum solution, and the tint ascertained by trying a particle of the mixture on a piece of paper with water and brush. After the bichromate is added the tint cannot be judged; moreover, with some

colors the tint obtained after printing is not identical with that of the coating mixture. The shadows of the final dry print are always much darker in color than the coated paper.

BRUSHES

Much has been written on this subject. The writer uses a broad, soft brush, such as is used to dust plates, to spread the pigment, and what is known as a Badger hair blender to equalize it.

COATING THE PAPER

There are two ways of coating the paper. One is to immerse the paper in the solution of bichromate and drying it in the dark, subsequently coating with the pigment and gum. The second, to mix the gum, pigment and bichromate together and coat with the combined solution. The first method is supposed to yield a rather more sensitive paper, but after experience in both methods the writer has settled down to the latter. The *modus operandi* is as follows: Mix the colors with the gum solution in sufficient quantity that a portion thereof mixed with an equal quantity of water will coat a piece of paper so that the grain is just visible through the pigment. Add to the gum and pigment an equal quantity of the bichromate solution. Next place a sheet of blotting paper on a smooth board or table, and with the thumb tacks fasten the paper to be coated thereon. Do not press the tacks too far in. Now charge the brush with the color after repeatedly stirring it. With the brush fairly but not fully charged rapidly coat the surface of the paper. Much depends upon the rapidity with which the mixture is driven over the whole surface. Failure in this respect will result in lines just as it does in pouring a developer on a plate. Now remove the balance of the pigment from the brush by pressing it against the edge of the containing vessel, and then equalize the pigment by rapidly making a series of strokes over the surface of the paper, using a light stroke and keeping them strictly parallel, with their edges just touching. Again squeeze the brush and repeat the operation in the opposite direction. The coating should now be perfectly even and free from streaks and blotches. If this is not the case it can be rendered so by a few very light touches of the badger hair blender, or it may even be necessary to again go over the surface with the flat brush. If the whole operation is completed expeditiously, as it should be, the paper will not have time to expand before the coating is even; if, however, it does, the pins must be removed and the paper refastened. The smallest irregularity caused by crumpling or an uneven subsurface will produce an uneven coating with trouble in development.

Most undoubtedly the coating of the paper is the great primal difficulty in the gum process. Endless conflicting directions have been given by different writers, but in the end the only solution is practice. When the knack has been acquired it seems simple enough, but the beginner must be prepared to spend time and waste paper. It must be remembered that the depth of color and amount of gum has a considerable effect on the quality of the final print. Thin coating with little pigment tending to soft effects like wash drawings. Much gum and more pigment give strength and solidity, until, if the thing is overdone, the pigment will flake off on development. This latter fault is much in evidence in many gum prints reproduced in the magazines, whose pitted,

measely appearance brings unjust obliquy on the process. Such an effect is never seen in the productions of Demachy, the Hoffman Brothers or other skilled workers. These pimply prints are the result of too thick coating or rough development. The practiced worker soon gets to know the correct thickness of coating fluid by the way it runs off the brush, something like thin syrup. Quite a few formulæ have been given for exact quantities of gum, bichromate and pigment, but there is little use for them, as they vary with the pigments used and the results desired. About half an ounce of forty per cent gum, half an ounce of ten per cent bichromate and sixteen grains of pigment is an average example.

PRINTING

The paper coated is then hung in a darkroom or cupboard to dry, and is then ready to print. The sooner it is printed the easier it will be to develop and the more contrasty the prints. If kept in a dark, dry place it will keep for a week or more. The writer generally prefers to use the paper the day after it is made, unless used to print from hard negatives, or very soft effects are desired, when four or five days is found to be better. The image is not visible when printed, so that the time has to be judged by experience, or by trial and error, or by an actinometer. Generally speaking, a good, strong but not dense negative will require an exposure of about fifteen minutes in the sun, or double that in the shade of a sunlit sky. After printing the development must be at once proceeded with, as the action of the light on bichromated colloids continues slowly when removed from its influence.

DEVELOPMENT

On the knowledge and skill here displayed will depend the final result. The serious gum worker will have before him a good solio print of his subject, and will examine it to see whether its relations of foreground, mid-distance and background, of light and shade realize his concept of what the picture should be, and he will proceed accordingly. If he does not think that there is anything to better or change, he will soak his print for five minutes in cold water, then pin it carefully to a board a little larger than the print, and float it face downwards in a vessel of water which may be slightly warm, 80° to 90° Fahrenheit. If the printing has been correct, the unmixed pigment will gradually become detached and fall to the bottom, and a perfect print full of gradation results. The time for this to be accomplished will vary, it may be half an hour or half a day, the average being one to two hours. Such prints are not unlike carbons, but are softer. Thus used gum printing is a simple reproduction process, having the advantage of permanency, choice of color and paper, but otherwise not differing from other processes.

But, let us suppose, as is most likely the case, that our solio picture does not realize our desires, that the foreground is too light and full of objectionable details, or the distance too dark and near, or that the sky is lacking the difference in gradation which normally occurs between horizon and zenith; we then proceed differently. We let the print soak until the details show enough to give the topography of the print, and then we remove it from the water and proceed to locally develop those parts of the picture that have the deepest shadows. When these are cleared, the parts that are to be rendered lighter

than they are in the solio print are next attached, and, lastly, the high-lights are cleared. If this rule is not followed the high-lights and half-tones will be washed away before the shadows are cleared. If it is desired to leave some portion darker than it is in the solio print, that portion is developed last, and only cleared to the desired extent. As to the means of clearing, I prefer a stream of water, cold or warm, according to circumstances. A coal-oil can with a faucet at the bottom, to which is attached a piece of rubber pipe, is a convenient apparatus. The amount of pigment removed will vary, according to the direction, force and temperature of this stream. Care must be exercised not to let it come with any force on or over the high-lights, as a moment's inadvertence may ruin the picture. If a half-tone is to be lightened by dropping water thereon the stream of water must be directed to the point by way of the shadows and not over the high-lights. The success of the gum worker is dependent on just these little precautions and dodges. Sometimes, when much pigment has to be removed from a picture full of half-tones, it is well to partly develop, then let the print dry, and then reimmerge and complete the development. After drying the pigment is not nearly so easily washed away when again moistened. Again, when small points, such as the edges of clouds, tips of waves, broken water on a distant coast, require lightening, a touch with a camel's hair brush while the print is *submerged* will readily effect the change. When the print is finally developed, it is immersed for five minutes in a one per cent solution of chrome alum, washed for a few minutes in water (not running) and dried.

There is a point in the drying, when the paper is quite damp, but not wet, when slight modifications in the distribution of the pigment may be made with great ease. This is the time to rectify the pimply appearance of the sky to which reference was previously made. The careful application of a blender will equally distribute the pigment. When the print is dry, spotting or other work can readily be effected with the brush and a little of the pigment with which the paper was coated. The above is an account of the writer's method of working; it is the result of experience, and is in general agreement with the procedure followed by Demachy and the writer of the able essay on gum printing in the *Photo-Miniature*. This much can be said with certainty to the amateur who wishes to take up the process, namely, that if there is anything of the artist in him no other photographic process can possibly meet his requirements to a like degree.

Mr. Fairman sends the following formula, which, he avers, has been passed round by enthusiastic amateurs for years and always gives satisfaction. It has the virtue of "keeping" for years without deterioration, and was originally given as especially suitable for the development of white draperies. This, however, depends most largely upon the "man behind the gun":

I. Water, six ounces; pyro, one ounce; alcohol, one dram; sulphuric acid (added slowly, drop by drop), three minims.

II. Water, thirty-two ounces; sodium carbonate, one hundred and ninety-two grains; sodium sulphite, one and a half ounces.

For normal exposure take one dram of No. I and four ounces of No. II, adding three ounces of water. If over-exposure is indicated or feared, add a few drops of potassium bromide, ten per cent solution.—*Photo Miniature*.



SUNSET ABOVE THE FOG LINE
by OTTO VON BARGEN

SUNSETS

BY F. E. MONTEVERDE

ILLUSTRATED BY THE WRITER, AND OTHERS

Of the numerous "*do not*s" that the beginner in Photography is cautioned against and the one that is most persistently brought to his attention as being the thing that he must be most careful to avoid at all times and places, is the pointing of his camera towards the sun — the consequences of which he is told would be fatal to the production of a picture. The reasons given are many, the principal ones being that the brilliant light of the orb of day striking directly into the lens will cause halation upon the plate, besides casting upon it "ghost suns"; also that any objects in the field will appear only as black shadows lacking in detail, and numerous other dire results. Now, it is true that pointing the camera directly at the sun will

cause all of these troubles, but there are ways and your camera at the resulting thing of beauty. It is a well-known fact, some of the best pictures late photographt that they have with camera directly or tabooed direct-obtained being in the long, low, and the of all the ob- of view, besides picture an at- cult to obtain way. So much landscape un- ditions, but as intended to

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THE WRECK

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-- moonlight effect

BY F. E. MONTEVERDE

no desire to contradict or antagonize these standard authorities on technical points, I say that the lens *can* be pointed directly at the sun and, without clouds intervening, a perfect negative can be secured. This is proved by at least two of the illustrations accompanying this article, the moonlight effect, and the low, rolling bank of fog over the Sausalito mainland, both taken at six P. M. in the month of July, from the upper deck of a fast-moving ferry boat; exposure, one-twenty-fifth of a second, stop 16, medium isochromatic plate, and Zeiss Convertible Series VII A lens.



--the sun behind heavy clouds

BY F. E. MONTEVERDE



—the low rolling bank of fog over the mainland

BY F. E. MONTEVERDE

It will be noticed that in the case of the moonlight effect, the orb of the sun is perfectly discernible, in fact, in the negative it appears as a bright spot with a still brighter ring surrounding it and sharply defining its circumference as if done with a graver. No attempt whatever at faking has been made upon any of these negatives, therefore they plainly show what can be done under proper conditions. These pictures are not difficult to obtain, especially in the summer months when



—A Sunset in Mexico

BY F. E. MONTEVERDE



SUNSET IN THE ARCTIC — FORTY MILES OF THE LYNN CANAL

BY ARTHUR C. PILLSBURY

the heavy fogs roll in from the ocean and are broken into fragments and shreds by the wind, producing beautiful effects and affording the opportunity of obtaining a perfect sun image without halation, such as is found in the two illustrations mentioned. The cause for this is very simple; in both cases the fog, broken and diffused by the strong wind from the ocean, caused a veil or film to partly obscure the face of the sun, giving an effect as if viewed through a smoked glass, and so subduing its glare that a sharp and clear image was produced upon the plate. This same effect can be obtained as well with the sun partly obscured by thin, gray clouds, if they happen to cover enough of the surrounding area to prevent the strong radiating rays from the sun, showing brighter than the orb itself. Should the time ever come that we will be able to reproduce upon the sensitive plate of the camera the colors of Nature as the eye sees them, then, indeed, there will be no more beautiful combination of brilliant colors, light and shade, than a reproduction of a clouded sunset.

In one of the illustrations with this article, *A Sunset in Mexico*, the clouds are beautiful in shape, the lights are brilliant and the shadows rich in depth. How much more beautiful would it be in Nature's colors. Imagine that all of the white in the print from the top to the line of the horizon one glorious body of color, ranging from brilliant orange to the most superb firelike crimson, the clouds with their transparent edges softly tinted and of the most beautiful shades of purple, black and gray, forming a superb background to the dark lines of the buildings and trees.

Another charming bit is the stranded boat on the beach, the sun immediately behind it, the silhouetted outlines of the masts and rigging showing boldly out, and the reflected image upon the waters in the foreground make a picture which,

if taken with the light in the orthodox direction, would have been commonplace and uninteresting.

It will be seen then that if we wait our opportunity we can produce good and correct pictures with the sun in the field. The exposure should be as long as practicable to obtain as much detail as possible in the shadows. Isochromatic plates are best suited for this class of work, either of fast or medium speed. I prefer the medium, as it gives ample speed and is not so tedious in its after manipulation. The ideal plate, however, will be the new plates just placed upon the market by one of the large manufacturers, called the double-coated isochromatic, which, besides giving the color values, will be anti-halation as well, thus counteracting any slight tendency in this direction, which the ordinary plate might have shown.

Any of the formulæ for developing these plates will work satisfactorily for these cloud sunsets. I prefer one that will give plenty of detail as well as density, for this class of negatives must not be of the "thin" variety. They need plenty of detail, but contrast as well. For this reason a metol-hydroquinone developer is preferable to any other, besides being the one most commonly used by all photographers, and therefore always at hand.



SUNSET IN CALIFORNIA

BY MRS. ALICE E. HART

ENCLOSURES FOR ARTISTS' PROOFS

The Stuparich Manufacturing Company of San Francisco, Cal., is a concern that seems to be wide awake in regard to the demand for enclosures for Artists' Proofs. They have recently issued a large line of new style enclosures which are elegant and practical. One style, which is illustrated herewith, seems to be *par excellence*. It is made of an extra fine quality of cover paper, has a mat or frame-like border neatly embossed, under which the picture is placed. Photographers in their vicinity will do well to look them up. —*Aristo Eagle*.

THE HAIR IN PORTRAITURE

BY FRANK M. SUTCLIFFE

The photographer who would deal successfully with portraiture must be artful rather than artistic. He must fall in with his sitters' ideas and keep his own in the background. He may have studied painting in Paris and have formed his ideals on the works of Reynolds, Romney or Raeburn, to say nothing of earlier or later masters. But when he turns photographer, all these must be quite forgotten. Because in nine cases out of ten his sitters will have formed *their* ideals on the fashion plates in the ladies' journals and on the wax figures in hairdressers' and bonnetmakers' windows.

At first sight it would appear quite an easy thing to photograph our sitters' hair and hats correctly, but that is not what they want; they do not care for truthfulness — they often want their hair and hats to appear in their pictures like some other person's hair or hat. "How is it, Mr. Photographer, that you have made my hair darker than Mrs. Jones's when mine is really lighter than hers?"

The first thing the photographer has to find out when the sitter comes into the glass house is: Does she wish her hair to appear light or dark? It is impossible to lay down hard and fast rules, but in most cases fair-haired people wish their hair to be lighter than it is, and dark-haired people the reverse. The exception to the former case is when gray hairs appear.

How must the photographer set about his work to get the desired results? Let us take a light-haired sitter first. There are two principal ways of making black white, and white black — by contrast with a background of an opposite shade, and by lighting with a brilliant or a subdued light. Therefore, if we wish to make light hair appear still lighter we take care to use a background a good many shades darker than the hair, and as we find that a concentrated light lends further assistance to this end we use a direct light rather than a subdued one. We may find that this makes that part of the hair which is in shadow too dark; then the retoucher must pile on the blacklead till it looks white. An experienced eye will always be able to detect this artfulness, but as it is not such an amateur detective who gives the order, this does not matter. By placing the sitter so that the light falls from behind the head even dingy, mouse-haired people can be made to appear with flaxen hair.

Owing to the weakness Photography has of making red hair, or hair inclined in that direction, darker than it appears to the eye, advantage may be taken by the most conscientious photographer of the above hints. Powder judiciously applied may also be used to lighten red or auburn hair.

It is not always easy to make gray hair come out black, but by softening the light to the utmost and by short development with weak developer much may be done; then there is always the knife of the retoucher to fall back on.

The hair always looks its best when it is arranged as nearly as possible as nature made it. Some few women with well-formed heads have sense enough to know this. Those whose heads are ill-shapen take the advantage of the hairdresser's art to hide their defects; woe betide the unfortunate photographer who suggests a simpler style of hairdressing to them.

The photographer who works for a living is at a disadvantage over his wealthier brother, the amateur, for the former cannot, as the latter can, ask his

sitters to do up their hair in a more becoming manner when he sees that it is not in keeping with the face.

Photographers who live inland will not have the difficulties those who live at the seaside have. It is an almost daily experience of the latter to hear his sitters complain, "Your sea air has taken all the curl out of my hair." Yet those who live by the sea all the year round often have curls enough, and to spare.

The photographer will often wonder why women's hair is so much more curly now than when he was a boy. Hair, smooth and dark as a raven's plume, is seldom seen now.

But to return to our camera. Let the photographer beware of stray hairs, I do not mean on his coat sleeve, but on the heads of his sitters. Hairs sticking out against the background should be deftly snipped off or pushed back, or they will give his retoucher and spotter no end of trouble.

And men's hair? Here the photographer has little cause for worry; either it is cut so close that it hardly shows in the picture, or it is so long that the sitters do not care how it comes out. And wigs? These can be treated as hair, now that the head-rest is no longer used, and the same hints can be applied. Never will the writer of this forget taking the portrait of an engaged couple, and the look of astonishment on the young lady's face when, by some mischance or other, the fork of the head-rest slipped and lifted off the young man's hair completely.

A BACHELOR'S DREAM

BY PERCY MONTGOMERY

From the flames of my winter fire steal the ghosts of bygone days
And, as the sparks fly upward into the starry night,
A smiling face looks into mine and, through the smoky haze,
The roaring log is the roaring sea and the sparks the dancing sun,
Crowning each wave with a golden crown as the ships pass one by one.
Through the reeds the wind is sighing and, as the logs burn low,
The summer day is dying and in the twilight's glow
We sit and watch the sunset and the colors come and go.
I sit and watch the shadows as they play upon the wall
And in their grotesque images I fancy I can see
Her dark eyes 'neath her waving hair peep smilingly out at me.
I sit and watch the firelight and the shadows on the wall
Because I am too lazy to dress myself and call.

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VOL. IV.

SAN FRANCISCO, CALIFORNIA, APRIL, 1902

No. 6

With La Fiesta, a prize fight, a woman's convention and a photographic salon scheduled for the first of May, the average Los Angeles citizen should feel particularly happy.

Elsewhere in this issue we have reprinted some of the recent correspondence of Mr. Ockerson, Chief of the Department of Liberal Arts of the Louisiana Purchase Exposition, and Mr. J. C. Strauss, the originator of the movement, for a proper representation of Photography at the great fair. Mr. Ockerson has evidently given the matter considerable attention and thought, but it would seem that he has been influenced in his decision, not to admit Photography to the Fine Arts building, by the opinions of the artists with whom he has conferred. The arguments he advances to Mr. Strauss are couched in much the same terms as used by the artist when discussing Photography, praise mingled with carefully concealed antagonism, clinging to the ideas of the past and neglecting the opportunities of the present.

Mr. Strauss is evidently conducting a plucky but a losing fight. The half-hearted manner in which he has been supported may be in part responsible for the present condition of affairs, but CAMERA CRAFT believes that the one factor that militates against a liberal treatment at the Exposition is the organized effort of the artists to keep the Art building for themselves, and until the photographic interests unite upon some plan it will be a hopeless task to stir the promoters of expositions from the old and beaten paths.

The expressed intention of the St. Louis Exposition management to turn the fair into one large Midway, where the pleasure-seekers may revel to their heart's content, is simply an indication of the drift of the times. For the last ten years the movement in this direction has been steadily progressing. The Midwinter Fair at San Francisco was a little worse in this direction than the World's Fair at Chicago. The Omaha Exposition went San Francisco one better, and the Buffalo show outdid Omaha. Now, St. Louis, profiting by the experiences of her sister cities, will turn the whole Exposition into a pleasure ground. In future we may expect to attend expositions, not for profit or for education, but for pleasure only.

The recent abandonment of the photographic gallery adjunct to its business by one of the largest department stores in the West points a moral that should prove invaluable to the professional photographers. Notwithstanding the fact that the gallery was busy from the day it opened until it closed, the venture was not successful financially. The explanation is very simple. The studio suffered from department store tactics. Prices were cut and the output of the studio was used to boom other features of the business, a dozen photographs being offered as premiums on certain purchases. The class of work turned out by this studio was equal to the average professional portraits, but the public, while ready to buy dry goods, pianos, groceries and hair dye at ninety-nine cents on the dollar, refused to buy cut-rate photographs.

This disposition on the part of the public is readily explained. The association of an artistic product with the commercialism of the department store was not pleasant, and the department store studio faded away.

It will not be long before the photographic departments in all of the big stores are abandoned as unprofitable. The public is beginning to realize that department store syndicates are not philanthropists, and that buying an expensive photographic instrument from an inexperienced department store clerk is not what it should be.

The amateur photographer who possesses one of last year's cameras will be inclined to view it with disgust after having caught sight of the gold and silver gingerbread, elephant and monkey skin, tornado shutters and other wonderful and ornamental adjuncts of the 1902 instruments.

It has been many months since CAMERA CRAFT has tooted its own horn, but we cannot resist the opportunity of drawing our readers' attention to the fact that at the present time every camera manufacturer in the United States is represented in our advertising columns, a condition of affairs that will not be found with any of our contemporaries.

We regret to state that the second article in Dr. Miethe's series on "Plates and Light Filters" arrived too late for insertion in this number.



A LEAF FROM CHARLES NAHL'S SKETCH BOOK

THE EDITOR'S MISCELLANY

THE PHOTO CRITIC

In furtherance of its policy to broaden the scope of its magazine, the Rotograph Company has decided to change the name of the monthly they have been publishing to *The Photo Critic*, with which is incorporated *The Bromide Monthly*. They promise to make things interesting, and a two-cent stamp for a sample copy will be well spent.

THE KODAK PROGRESS COMPETITION

Mr. Charles I. Berg, Mr. Henry Troth and Mr. Rudolph Eickemeyer, Jr., have consented to act as judges in the "Kodak Progress Competition." The selection of these prominent photographers to pass upon the thousands of prints which amateurs all over the world will shower upon the Eastman Kodak Company is sure to meet with the hearty approval of every contestant. All of the judges are too well known to the American photographic public to need comment, and we can but say that we anticipate the close of the contest with fully as much interest as do the judges.

A NEW SHUTTER

Every photographer should investigate the newest Iris diaphragm shutter now being offered by the Bausch & Lomb Optical Company, Rochester, N. Y., called by them "Volute." Necessity is the mother of invention, and she has brought forth in "Volute" a shutter which meets all the necessities of modern photographers in the best possible manner. "Volute" is the most compact and smallest Iris diaphragm shutter yet made. It will take larger lenses, and lenses with combinations closer together. It is the speediest Iris diaphragm shutter made, express trains, jumping athletes and race horses being its normal diet. Its construction is simplicity itself, and it is very easy to operate. All the working parts are entirely enclosed within the case, and the workmanship is of the very finest throughout, comparable both in appearance and operation with fine watchwork. A new catalogue is now in preparation describing all the Bausch & Lomb shutters, and will be mailed on request.

LOS ANGELES CAMERA CLUB

The interest in the photographic classes continues, and last month's lessons in bromide enlarging were well attended. The bromide room has been renovated, new lights added, etc., until now the arrangements for bromide work are complete. A new enlarging and reducing camera is on the way from New York which, through the kindness of an interested member, is to be loaned the club for an indefinite period, until it is in a position to purchase.

The subject for this month's lessons, "Lantern Slide Making," is one in which all the members are interested, and the results of which will no doubt be seen in the next contribution of slides to the Interchange.

The regular meetings of the club are held as usual, on the second and fourth Fridays of each month, while the third Friday is given over to amusement and, as a means of getting the members better acquainted, forms an important feature of the club life. Music, slides, humorous addresses, dramatic readings and refreshments all enter into the program, while the evening frequently closes with an hour's dancing.

The last outing was at San Pedro, and included a trip on the steamer Elliott, which gave the excursionists a good view of the new breakwater and harbor, and a fine sea appetite for the good things provided for them by the caterer at the Brighton Beach Hotel.

A full moon and the highest tide of the season made the beach unusually attractive, and the camera people lingered until late in the evening, returning on the last train, tired but delighted with the day's outing.

CALIFORNIA CAMERA CLUB

A special meeting of the California Camera Club, for the purpose of taking action upon the report of the Committee on Nominations, was held in the club rooms on Thursday evening, March 27, 1902. At this meeting the nominations made by the Election Committee last month were formally accepted.

The following program was rendered: Slides from the Photographic Society of

Philadelphia, the Bethlehem Photographic Society and the Frankford Camera Club; Miss Alfrida Lahl, vocal solo, accompanist, Miss Ellen Lundberg; Little Zeala Cook, "The Youngest Contralto," vocal selections; Miss Marion Cumming, soprano solo, "The Spring Has Come," by Maude Valerie White; Miss Ella Blake, vocal selections, (a) "Irish Folk Song," by Foote, (b) "The Ungebuld," by Schubert; Miss Gladys Lahl, violin solo, "Cavalleria Rusticana" (by request), accompanist, Miss Ellen Lundberg; La Petite Dorris, specialties; Mrs. Alice Eckman Cramer, vocal solo, "Spring," by Tosti; Miss Gussie Huhes, vocal selections, (a) "Coo Coo Song," (b) "Close your Dreamy Eyes," accompanist, Miss Agnes Vice. The Entertainment Committee was highly complimented upon the enjoyable program.

THE ST. LOUIS EXPOSITION

The following correspondence between Mr. J. A. Ockerson, Chief of the Department of Liberal Arts of the Louisiana Purchase Exposition, and Mr. J. C. Strauss of St. Louis, is evidence of the fact that CAMERA CRAFT's editorial last month on the half-hearted manner in which the East is backing up Mr. Strauss in his efforts to place Photography on a proper footing at the Exposition was well timed:

ST. LOUIS, U. S. A., March 21, 1902.

MR. J. C. STRAUSS,
3514 Franklin Ave., City

MY DEAR SIR:—In thinking over the situation as to Photography, it occurs to me that the photographers are taking entirely the wrong stand in their claim of "Photography in the Fine Arts Building, or nothing."

Now, in the first place, as I understand it, photographers wanted to flock entirely to themselves and put up a building of their own, at their own expense, in which should be housed *everything* pertaining to the photographic profession. It was not then considered out of place for the artistic photographer to touch elbows with so-called commercial branch of Photography. Why should it be more so if housed in a group of the Liberal Arts Building?

Under existing conditions, would it not be best for the photographers to take the ground that they will prove themselves equal to the emergency and will not be smothered out, but will club together and prepare a place in the Liberal Arts Building for their art work that will establish, beyond a doubt, their claim to a high position as a fine art? Get up something that will make the Fine Arts Department "green with envy." By this means you can establish your position before the world and set the question as to your rights forever at rest.

Your art is evidently still in a transition state. You are making giant strides towards greater perfection every day, and no man can yet say where the end will be.

It strikes me that it would be very undignified and unworthy of your exalted profession to stay out of the Exposition because you cannot get *all* you want. That it would be far better to raise a fund to fix up a gem of a place in the Liberal Arts Building, according to your own ideas and plans, and fill it with pictures that will challenge the skill and the admiration of the old-school artists who hold that fine art is confined exclusively to work done with the brush and the chisel. Challenge them in this way to measure lances with you, and I am confident that in the end you will be more than glad that you did not yield to the first impulse to hold aloof.

To this very laudable end I pledge you all the assistance in my power.

Trusting that you and your associates will come to see this matter in the light set forth in the above lines, I beg to remain,

Yours very sincerely,

(Signed) J. A. OCKERSON,
Chief of Department of Liberal Arts.

ST. LOUIS, Mo., March 22, 1902.

COLONEL JOHN A. OCKERSON,
Chief of Departments Liberal Arts, City

MY DEAR SIR:—I am indeed pleased to receive your letter of the 21st inst., because it evidences a decided interest in the photographic display, and it is gratifying to know that you regard an artistic exhibit one to be desired.

However, the premise on which your argument is based is in error as to some points of fact. The subject of the proper representation of Art in Photography at our World's Fair was first suggested in a letter written by me, last July, to Governor Francis. The essential points in the plan outlined by me were:

"Have a pavilion devoted exclusively to pictures produced by Photography, provided same give evidence of artistic feeling. The display of pictures should be along Salon lines, that is to say, only such should be exhibited as are considered worthy by a competent committee of artists, not photographers. No distinction to be made between amateurs and professionals."

You will see that the request made last July, and it was encouragingly received by Governor Francis, was identical with that now made, except that some months later the Executive Committee of the Exposition rejected the "separate pavilion" idea on the ground of cost, and we have since substituted "Art Building for Art Photography." At no time did the Association of America, or any other body of photographers, offer to pay for the pavilion.

The entire letter to Governor Francis was published in the *Globe-Democrat* of July 16, 1901. I wish to call your attention to some of the statements therein made by me:

"In recent years portraiture by Photography has successfully invaded Art realms and commanded recognition by Art critics, as far above and beyond the mechanical in processes and in results."

That this was and is true is proven by the actions, to which your attention has been directed, of the Boston Museum of Fine Arts, Pennsylvania Academy of Fine Arts, Department of Fine Arts, Glasgow Exposition, American Institute, New York City, Art Institute of Chicago, "International Studio" (periodical), "Brush and Pencil" (periodical), and by the further fact, that at the Photographic Salons held in London, New York, Philadelphia, Chicago and San Francisco, "old-school artists" (to quote your words), who formerly contended "that Fine Art is confined exclusively to work done with the brush and the chisel," were the judges to decide which photographic productions were entitled to salon honors, because of "distinct evidence of individual artistic feeling and execution."

You will concede that there is an immense distinction between photographers clubbing together, fitting up a section in the Liberal Arts Building, proclaiming themselves and their work as the "real thing" in Art, and the other condition: the recognition and the heralding forth to the world, by the Louisiana Purchase Exposition, the greatest of all World's Fairs, that Photography is a Fine Art! This recognition is what we are striving

for. Let this be granted, and I am quite confident photographers would willingly spend money to make the setting for their display worthy of the Fair and Fine Art surroundings.

There is one more point in the letter to the Governor to which I will direct your attention: "The clerical and detail work of giving this feature the widest, most general publicity, would be conducted by the photographers of this country. Through their efforts, and that of photographic periodicals, the St. Louis World's Fair would become advertised in every town of any consequence on the globe, and gain the enthusiastic support of more individuals (amateur photographers) than would result from any other contemplated display. The universality of the camera has caused nearly every person in the more enlightened countries to have a lively interest in photographic productions." Much of this has already been proven true, as documents submitted to you attest, and all my predictions will be realized if Photography is recognized as an Art.

So with the kindest of sentiments for you, personally, and appreciating your efforts in this matter, I must still contend that the only decision which will command the enthusiastic support and co-operation of the advanced camera workers, is the acquiescence in the demand "Art Building for Art Photography."

(Signed)

Yours cordially,
J. C. STRAUSS.



MADE WITH GOERZ LENS



MADE WITH GOERZ LENS

CATALOGS FOR THE YEAR

The camera manufacturers have finished their annual task of cataloguing the new instruments, and the photographic world will be kept busy during the coming fortnight discussing the relative merits of the new focusing Weno Hawkeye, the diminutive No. o Folding Pocket Kodak — which the Eastman Company styles the vest-pocket kodak — the Pocket Poco, which is the smallest and daintiest of the Poco series, and the elegant Folding Pocket Graphic, with its gun-metal trimmings, new automatic shutter and ebony finish.

The Premo lines uphold its well-earned reputation with a new Premo Supreme, and calls the attention of its many admirers to the fact that this particular instrument is fitted with every up-to-date device known to the craft.

The Century Company, not to be outdone by their rivals, offer a magnificent camera with a very significant name, the New Century Ultra Grand. The New Grand is covered with elephant skin, has a satin bellows, and with its silver-plated metal parts, diaphragm shutter and the clips on the solid mahogany plate-holders, it is quite calculated to take away the breath of the admiring amateur.

The cover designs on the new catalogues are all superior to the work shown last season, the most elegant being those of the Blair and the Kodak Company.

The Blair Camera Company describe many new and useful improvements in camera construction. Their latest improvement, to which we have just called the reader's attention, is the Focusing Weno Hawkeye. They claim it to be the first camera offered to the public so far which has the advantage of focusing

the object of full size upon a ground glass, and being constructed in such a manner that loading and unloading can be accomplished in daylight. This method makes it necessary to construct the camera so that a section embodying the film chambers will telescope when drawn upward, the spring actuating ground glass adjusts itself automatically to the same focal plane as the film occupies. This, of course, allows focusing and centering the object accurately. After focusing, the film section is pushed into position, and at the same time the ground glass moves backwards to its original place. This improvement does not in any way hinder the use of the camera as a simple snapshot outfit, as the operator can focus his instrument in a usual manner by the use of a graduated scale.

Those interested in film cameras should not fail to write the manufacturers for their 1902 catalogue. Blair Manufacturing Company, Rochester, N. Y.

The Eastman Kodak Company eclipses their own high standard in the use of printers' ink in their 1902 list.

The growth and triumph of an idea is the motto used on the cover of this catalogue, and its contents will well admit of such a slogan.

We notice that the Eastman tripods, which have always enjoyed a ready sale, have been reduced in their list price, while the improvement on the rotary shutter used on the Bull's Eye, the triple action shutter furnished with a No. 3, 4 and 5 Cartridge Kodak and the No. 4 Bullet Special will greatly add to the sale of these instruments during the coming season. As an (extra) shutter to be used when the amateur desires a high-grade lens fitted to his Folding Pocket Kodak we find the new Bausch & Lomb automatic fitted with Iris diaphragm stops and with the scale opening at Nos. 3, 4, 8, 16, 32, 64, 128.

The No. 0, Folding Pocket Kodak is the only striking departure from the standard line of instruments manufactured by this company. Because of its diminutive size and excellent workmanship it will undoubtedly prove as great a seller as the popular Brownies. Copies of the Kodak catalogues can be obtained from any of the Eastman agents.

The Century Camera Company of Rochester, having greatly enlarged their facilities for manufacturing plate cameras, offer six-

teen different models to the trade this year, and as these gentlemen have only attempted to market three styles up to the present time there is naturally more that is new and novel in their list than in any of the other catalogues offered. Their manner of describing and explaining the use of each section of the camera is of immense value to the amateur desiring to select a new instrument, or the beginner who wishes to know about all things and understand the use and reason for each section of his instrument.

The swing backs, swing bed, rising and falling front, clamp back panel, reversible back, extension beds and finders are all taken up individually, their use and abuse being tersely and clearly described.

The most interesting point in the new Centurys are the curtain slide shutters, which accomplish the same results as the well-known focal plane instruments. The new rack and pinion swing and the new automatic locking devices are all distinctive features of this line.

Every instrument manufactured by the Century Camera Company from the model 11, listing at \$11.00, to the Ultra Grand, listing as high as \$239.50, is fitted with a strong and durable piano hinge. This one point will appeal very strongly to the many photographers who have had the front bed of their cameras torn away from the main box in years gone by.

The Rochester Optical and Camera Company have two catalogues, the Premo and the Poco. They show many new features, and the line generally is greatly improved. One pleasing point in these new lists is the "detail of equipment," printed under the heading of each instrument in the line.

The Pocket Poco, the Snappa Camera, the Pony Premo, No. 7 and Premo Supreme are all new and worthy of most careful investigation.

The Imperial Camera Company, the Gundlach Optical Company and Folmer & Schwing are late in issuing their catalogues, but we trust that we will have the pleasure of mentioning their contents next month.

Mr. L. E. Foster of the Gundlach Optical Company, Rochester, N. Y., made his annual trip through the West last month. He reported trade conditions as being greatly improved over the past season, and anticipates great interest in the work for 1902.

DON'T FORGET

1. Don't forget to overhaul your shutter after it has been put away for a time. See that the shutter is working satisfactorily—that the rubber tube and bulb have not got dry and hard, or have cracked and become leaky. A little dust or rust may have collected here or there. This can often be cleared out by working the shutter a few times, first at one speed and then another. If you forget to do this, it may perhaps happen that just at the critical moment the shutter will fail to work, and your "best negative of the season" will be lost.

2. Don't forget to see that the lens is all right, *i. e.*, free from dust. For this purpose, a bit of very old soft silk rag, or a clean and dry soft camel-hair brush may be used. But always, before beginning to dust your lenses, turn them about this way and that way, and shake off as much dust as you can. Then see that the stops are all in the case, or that the Iris diaphragm is in working order, and not worn bright at any point. Should this be the case, have it attended to at once, before you spoil a negative by getting strange and mysterious bright spots and streaks. See that the lens cap is all sound and a fairly tight fit. It is not a bad plan to fix the cap to the lens tube by means of stout thread. Make a knot on one end, pass the other through the edge of the cap, make another knot, then tie the other end round the lens tube, and leave about four or six inches between the cap and tube.

3. Don't forget to dust the inside as well as the outside of your camera. Remove lens and focusing screen. Rack out camera to full extent. Moisten a bit of clean rag with a drop of glycerine—just enough to give a trifling stickiness but not to feel at all wet—and go into every bellows fold, and the corners thereof also. You will probably be somewhat surprised to find how very dirty your clean rag has become the first time you go through the operation. Contemplation of this now dirty rag may help to explain some of the pinholes of your recent negatives.

4. Don't forget to dust out with a dry and somewhat stiff brush the inside of your double backs or plate-holders, and, at the same time, see that the draw shutters work fairly easy and comfortably. If they are too stiff, you may find that in getting them out you have shifted your camera and spoiled the composition. To ease light dry slides, rub with a bit of French chalk or soft lead pencil.

5. Don't forget to see that the tripod is all in working order. Sliding parts may require easing by a little rub with pencil, chalk, or black lead. See that the tripod top and camera screw are fastened together by a bit of light chain or catgut, so that you cannot forget the screw when you have the tripod top. If interior work is contemplated, you will require some form of point protector, and some contrivance to prevent the points slipping on a smooth floor.

6. Don't forget to put the plates in the plate-holders the right way round, *i. e.*, so that the film will come next the lens; and, at the same time, don't forget either to dust the film side with a soft brush when they go into the dark slide before exposure, and also when they come out, after exposure, and before development.

7. Don't forget your note-book exposure record, your view meter, exposure meter, addresses, permissions to photograph this or that object that you are visiting, time-table, if going by train. In fact, don't forget any of those sundry *little things* that you are likely to want (*e. g.*, pencil, pocket-knife). To prevent overlooking anything of this kind, just take pause for a moment and in imagination run over your intended little outing. 'Bus to, train to (time-table), walk to (address, permits), set up tripod—legs, top, camera screw—camera, lens, shutter, stops, color filter, plate-holders, view meter, exposure meter, note-book record, etc., etc., and as you go through the operations mentally, tick off the various things you are likely to want.

8. Don't forget that plates do not improve by being left a few weeks in the dark slides. Strange streaks of light or dark have been accounted for by emanations coming from the various materials used in the construction of the dark slides. Therefore, as soon as the exposures have been made, either develop your plates or take them out of the dark slide and pack away—film to film, with nothing between—wrapped up in the same paper wrapping that they were sent in by the manufacturer. On no account ever use newspaper or other printed matter for wrapping plates. The emanations from printers' ink have spoiled many a good negative, therefore keep printers' ink outside your plate-box and away from your plates.

9. Don't forget, when developing, that the temperature of your developer, dishes, etc., will, in most cases, have a marked effect in slowing action. Indeed, with such low temperatures as the tap-water reaches in the

winter months—say, within ten degrees of freezing point—some developers are so slow in working that staining of the film is almost a certainty, and, indeed, in some instances, they practically cease to work at all. The moral of this is to keep your dishes and solutions as near sixty-five degrees Fahrenheit as you can, and not to go outside the limits—sixty-seventy—if you can possibly avoid it.

10. Don't forget when you dissolve hypo in water to make a fixing bath that this lowers the temperature of the water by several degrees—enough to cause the fixing bath to work very slowly, and take perhaps twice as long to do its work. Therefore, make your fixing bath with *warm* water. In summer, if this warm solution is poured into a flat dish it will soon cool down to ordinary temperatures. In winter, if it is too cold, stand the bottle containing the solution in front of the fire, and shake now and again, until it is about sixty-five degrees Fahrenheit.

11. Don't forget that washing after fixing is as important as fixing. It is just as important to get the hypo out of the film, after it has done its work, as it was to get it into the film to do its work of fixing. Therefore, do not fall into the common mistake of thinking that *soaking* a plate at the bottom of a dish of water is the best way of washing it. Washing a plate under the tap in a very slowly, gently flowing stream for ten minutes will get out more of the "not wanted" hypo than soaking it at the bottom of a dish for ten days. Next best to a gently flowing stream is rocking the plate in a dish of water, and changing the water and rinsing the plate every four or five minutes for, say, half an hour. But to be on the safe side, a plate should be in a gently flowing stream or in any well-arranged tank for at least an hour.

12. Don't forget that a plate should dry uniformly. Experience shows that if the upper half of a plate be dried slowly in a cold place, and the lower part dried by taking into a warm place, there is very likely to be a line or mark of some kind. It does not seem to make any difference whether a plate be quickly or slowly dried, provided the whole be dried under the same conditions. Again, it is important to select the drying place as free from dust as possible. The reason is obvious enough.

The foregoing dozen don'ts are probably quite well known to the majority of our readers. Nevertheless, it often happens that "what we know best we heed least." — L. C. F., in the *Amateur Photographer*.

PACKING PLATES

Most photographic manuals advise dusting the plates with a soft brush before placing in the dark slides or holders, with a view to the prevention of pinholes. My experience is that pinholes are either the result of this very application, or they are defects in the plate—mostly this last; for I find one well-known make always has pinholes in my hands, while others are entirely free. The plates are mostly very free from dust as they are packed; but I always give a little tap on a bit of wood as I put in holders, so as to jerk off any possible particles. To brush is to cover with numberless particles, and the brushing sets up an electrical action which causes the dust to adhere strongly. Again, we are advised to soak a minute or two in water before developing, and brush again to remove air-bubbles and allow developer to penetrate. This is bad advice. There are never air-bubbles—in my experience—if the developer is flooded on the plate, and the water in film hinders and weakens developer, and prevents penetration.

Only a month ago I read again the advice to pack plates after exposure film to film in the plate-boxes, waiting an opportunity to develop. Until I learned better I spoiled no end of plates following this advice. Exposed plates packed film to film fog each other, and if they remain a week or two are spoiled. I have used the paper plates are packed in to put betwixt each as I return to plate-boxes, and find that all right. — *English Mechanic*.

Mr. F. G. Burgess, representing the C. P. Goerz Optical Company, paid the CAMERA CRAFT editorial rooms a visit last month. Among other interesting things Mr. Burgess had with him were two remarkable focal-plane pictures, showing the great speed and depth of the Goerz lenses. We have reproduced the two pictures, so that our readers can judge for themselves the wonderful properties of these lenses. The Goerz Company is now placing on the American market the famous Goerz-Anchuz camera, so popular in Europe. This camera is equipped with the F 6:8 lens and an improved curtain shutter, with which an exposure of 1-1800th of a second is possible. Another novel instrument shown the trade was the Photo Stereo Binocular, with which it is possible to make both single and stereo pictures, and in addition can be used as a field and opera glass, six lenses in all being supplied with the instrument.



THE BELLE OF THE FLEET

Courtesy Sunset Magazine

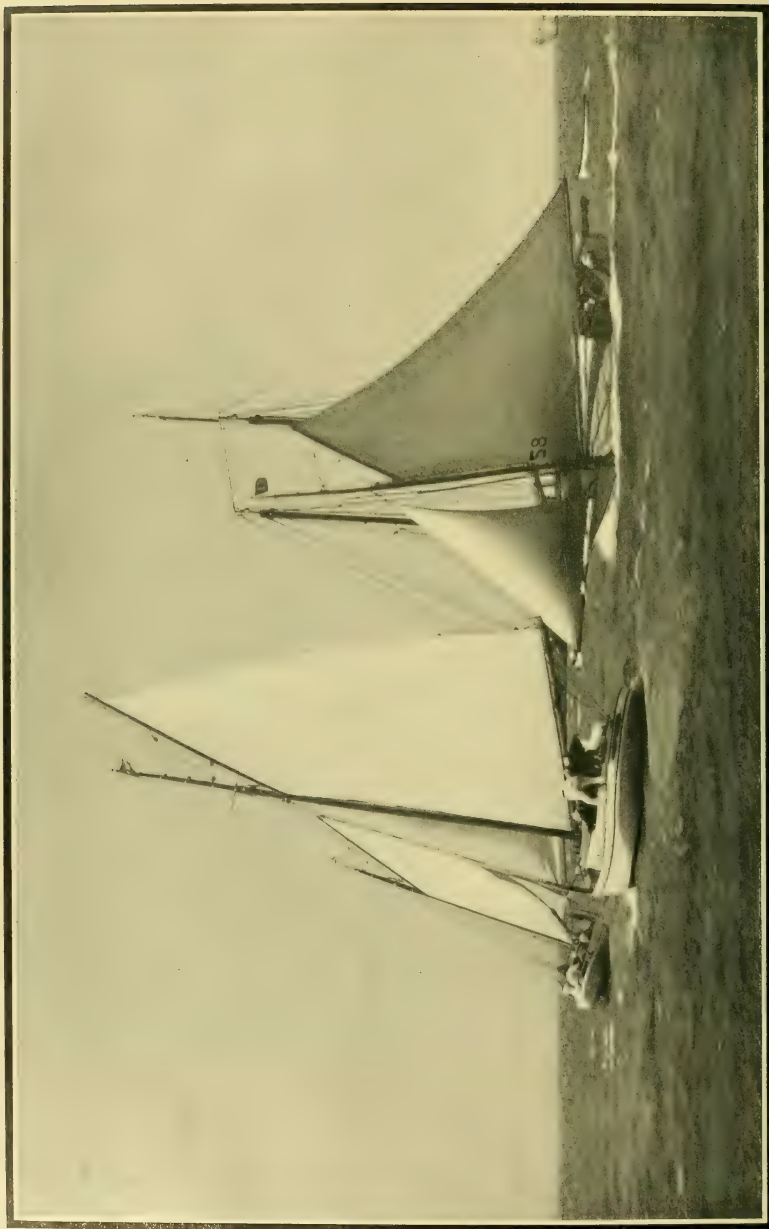
OPENING OF THE YACHTING SEASON

The yachting season has opened, and San Francisco Bay is beginning to be dotted with the white-winged fleets that herald the approach of summer and its breezes.

The raising of the bridge at Tiburon was attended by a large number of yachtsmen,

and nearly all of the photographers prominent in yachting circles were present, among them being Fayette J. Clute, Otto Kuster, Arthur Inkersley, and the newspaper photographers.

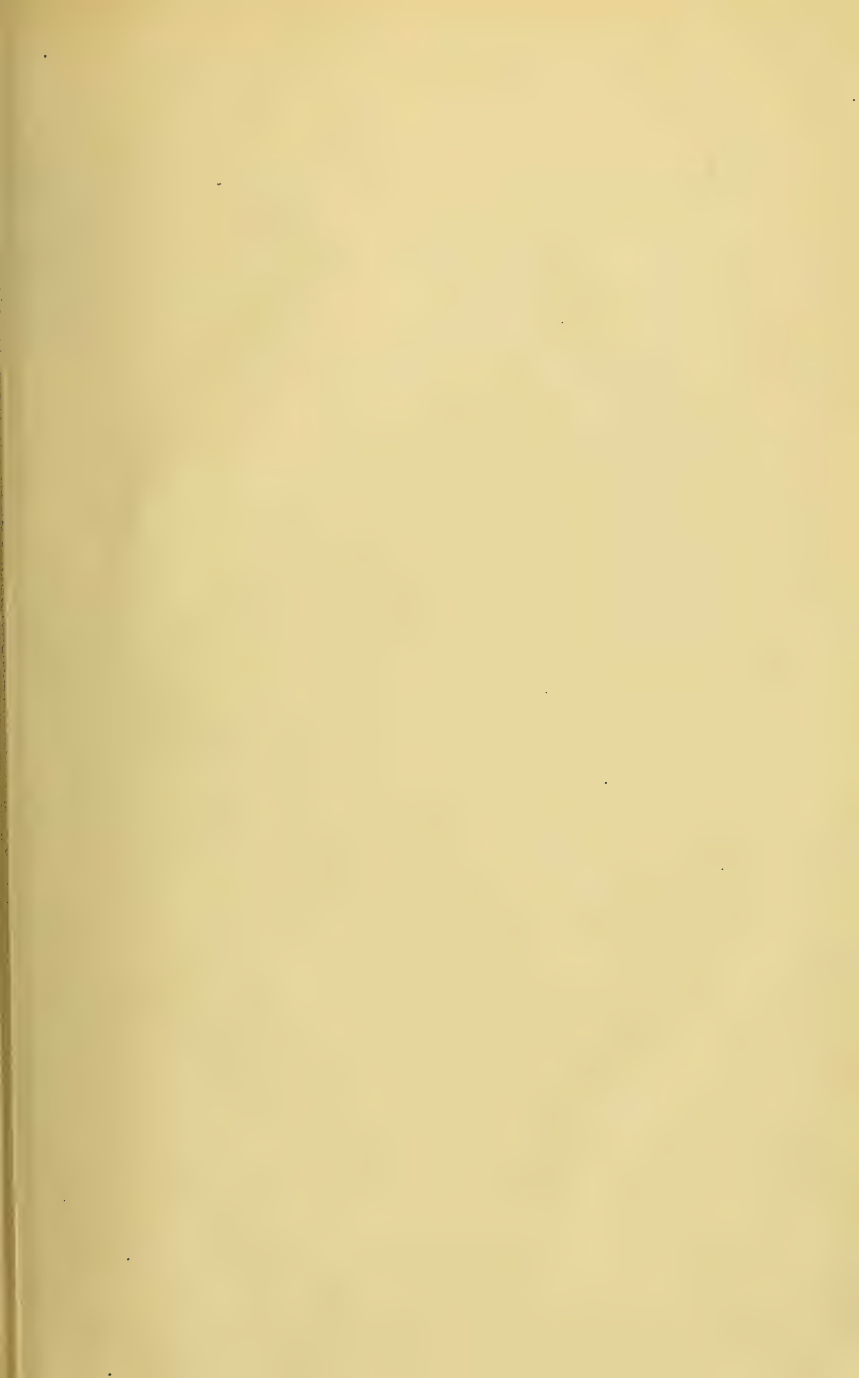
Every indication points to a remarkably successful season, and the yachtsmen are busily engaged in preparing for it.



By F. J. Clute

IN CLOSE QUARTERS—SNAPSHOT JUST BEFORE A COLLISION

Courtesy Sunset Magazine



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